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# Assessing financial risk management in local governments: Case of Istanbul Metropolitan Municipality (IMM)



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### ABSTRACT

*The purpose of this study is to examine the impact of the financial risks local governments are exposed to within the scope of financial risk management practices. Istanbul Metropolitan Municipality (IMM) was selected for this study because it is the largest local government with the highest budget. In the study, the development of financial risk performance of IMM between the years 2008-2018 was examined in the light of the risks IMM is exposed to. The main results regarding the risks faced by IMM during the period are as follows: Financial data obtained from the financial statements of IMM were used to examine the performance of listed risks & effects they have on the budget of IMM. The results indicate that (i) risk of dependence on shares from the central budget revenue; (ii) IMM was directly dependent on the central budget in terms of revenues, so in this period, the risk of dependency was high in terms of counterparty risk.*

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## Introduction

Risk is a matter that has been considered for a very long time and the future predictions are tried to be made carefully. In the calculations of the enterprises, the closer the value of the existing or possible risk is to zero, the predictions for the future are thought to be extremely well made and it is thought that the risk will provide profit, not loss.

Although it has many definitions, in its most general form, risk can be defined as “danger of damage, possibility of encountering undesirable consequences” (TDK, 2020). Risk is the possibility of any event and situation that will prevent the enterprise from realizing its strategic, financial and operational goals (Keskin, 2010: 39). It usually refers to the occurrence of a negative or undesirable event or set of events, and the possibility of exposure to damage, loss, disadvantage, danger and negative effects (Topaloglu, 2013: 207).

Since it is not possible to eliminate it completely, minimizing the risk and managing it well forms the basis of today's risk management approach. In general, risk management can be defined as a process designed to identify potential risks that affect the ability of the enterprise to fulfil its objectives and to manage these risks within the enterprise. Risk management is important in terms of foreseeing and determining unknown risks and potential losses before they occur, and taking necessary precautions before loss / damage occurs. Risk management contributes to making quick and effective decisions, preventing waste of time and resources, keeping the risk at a reasonable level, and minimizing losses. If risks are managed well, businesses can also turn the crisis and risks they face into an opportunity for business. Therefore, identifying potential risks that adversely affect the achievement of the business's goals,

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monitoring and evaluating their development, and taking the necessary measures are vital for business success, sustainability and corporate governance (Ozsahin and Uzay 2015: 206).

Financial risk, on the other hand, is a concept that investors never hesitate to encounter since it is a concept that is evaluated by calculating returns. Because, financial risk is evaluated on the basis of gains rather than losses. In parallel with this, financial risk management, as a concept that includes the examination and control of risks, shows a continuous function feature in mathematical terms.

In the study, it is aimed to examine the significant financial risks exposed to within the scope of financial risk management practice in local governments. To this end, Turkey's largest and most wide-ranging budget Istanbul Metropolitan Municipality (IMM) due to the case of the municipal structure with operational activities has been chosen as examples of organizations representing local governments. In the study, the development of financial risk performance of IMM between 2008-2018 in the light of certain risks that are important for the Municipality has been examined.

In summary, the main risks in terms of IMM; dependency risk, borrowing risk, currency risk, interest rate risk, credit / liquidity risk, maturity risk, resource risk, financing risk, foreclosure and collateral risk and other (information system infrastructure risk, etc.) risks. For this reason, the risks above-mentioned in the study were discussed. Therefore, in the light of the mentioned risks and various financial data, the performance of the said risks over the years in the relevant period and their effect on the IMM budget and calculations were examined.

In addition, the general view of IMM on the management of financial risks within the aforementioned risks will be presented and various evaluations and recommendations will be made regarding the development and good management of these risks.

In the study, the development of the significant financial risks faced by the Istanbul Metropolitan Municipality between 2008-2018 is analyzed and its effect on the municipal budget and calculations is examined.

The study ends with the conclusion, suggestions and references.

## **Literature review**

### **Conceptual Background**

#### **Risk, Risk Types and Risk Management**

In corporate companies, there are special processes for the identification and evaluation of risks that may hinder reaching the targets. Risk management contributes to the effective and efficient use of business resources. All risks encountered in risk management should be evaluated and necessary measures should be taken to manage these risks by focusing on the most important risks that are important for the business (Moeller, 2007: 54-56).

Risk management includes a range from perceiving risk to developing strategies against risk, and a general risk management consists of the following basic stages (Usman, 2018: 1592-1600):

*Internal Environment: Before determining the road map to be followed against the risk, the conditions of the environment within the organization should be evaluated.*

*Determination of Goals: It is necessary to clearly identify the targets that the risk will affect and the risks of the enterprise are or will be deployed on.*

*Identification of Events: Just like the targets, there is a need to clearly identify the events that will result from the risks of the enterprise.*

*Risk Assessment: Regardless of the type of risk, it is necessary to consider the contents of the risks by evaluating them from many different angles.*

*Risk Response: It is the evaluation and implementation of the measures to be taken against the risks and the psychological reactions.*

*Control Activities: Policies and procedures that support the implementation of appropriate risk responses are included in control activities.*

*Information and Communication: Information flow and sustainable communication are of great importance in terms of the existence, content, possible effects of risk, and attitudes and behaviors against risk.*

*Monitoring: It is the control, follow-up and surveillance of risk management*

There are different classifications for the risks faced by businesses. There are two basic risk distinctions, financially systematic and unsystematic risk. Systematic risks are those that arise from the system and therefore affect all companies in different degrees but in the same direction and cannot be controlled. Unsystematic risks are the risks posed by a particular company and industry conditions. Globalization, new financial instruments, new IT technologies have diversified the risks. Similarly, in the literature, there are various classifications of business risks and financial risks, double, market risk, credit risk and operational risk, triple, market, credit, operational, liquidity and local risks.

The table below containing various sample risks is given below (Aksoy, 2018: 56-61):

**Table 1:** Various types of risk

<ul style="list-style-type: none"> <li>▪ Market Risk</li> <li>▪ Credit Risk</li> <li>▪ Operational Risk</li> <li>▪ Borrowing risk</li> <li>▪ Maturity risk</li> <li>▪ Resource risk</li> <li>▪ Financing risk</li> <li>▪ Liquidity Risk</li> <li>▪ Liquidity risk related to financial market</li> <li>▪ Liquidity Risk Regarding Funding</li> <li>▪ Risk of Non-Compliance (legal risk)</li> <li>▪ Foreign Exchange Risk</li> <li>▪ Inflation risk</li> <li>▪ Economic Risk</li> <li>▪ Political risk</li> <li>▪ Interest Rate Risk</li> <li>▪ Strategic Risk</li> <li>▪ Risk Occurring Before Concluding the Transaction</li> <li>▪ Reputation Risk</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fraud/corruption</li> <li>▪ Accounting Risk</li> <li>▪ Activity (Transaction) Risk</li> <li>▪ Risk of Failure to Conclude the Transaction</li> <li>▪ Absolute Risk (Natural Risk)</li> <li>▪ Detection Risk</li> <li>▪ Social Risk</li> <li>▪ Industry Risk</li> <li>▪ Transfer Risk</li> <li>▪ Country Risk</li> <li>▪ Insufficient Information Risk Regarding Legislation</li> <li>▪ Refinancing Risk</li> <li>▪ Residual Risk Control Risk</li> <li>▪ Management risk</li> <li>▪ Dependency risk</li> <li>▪ Reinvestment Risk</li> <li>▪ Operational Risk</li> <li>▪ Foreclosure and collateral risk</li> <li>▪ Risk of error</li> <li>▪ Other risks (information system, infrastructure, etc.)</li> </ul>
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Risks encountered are divided into two groups as financial risks and accounting risks in another classification. Financial risks are the possibility of loss of assets as a result of the implementation of improper financial management policies or performing irregular transactions. Accounting risks are the possibility of errors in financial statement items, reports and records in which the accountability for assets is fulfilled. Financial Risks, on the other hand, refers to the processes that are both related to the companies themselves and beyond their control. Therefore, financial risk is an issue that businesses should focus on long-term and consider different factors (Moles, 2016: 33).

Furthermore, these are some instances below related to our article topics in literature. In his paper, Odero (2017) analyzed the financial performance at the municipality of Karibib, Namibia for the period 2004-2008 by employing ratio analysis. The results showed that the municipality of Karibib has been performing poorly in terms of financial management. In another study by Trussel and Patrick (2018) aimed to developed to be a model to assess and rank the financial risk of a municipal government (Municipality of Pennsylvania). Logistic regression was used with financial indicators to assess the level of financial risk and the municipalities were ranked according to their financial risk. The study revealed that financial risk is positively associated with debt service, population, tax effort, and public service on roadways, while negatively correlated with intergovernmental revenues, operating position, user charges, capital outlays, fund balances, and tax revenue concentration. Ozcan (2009) took the example of Istanbul Metropolitan Municipality (IMM) Istanbul Sea Buses Corporation (IDO) and examined the impact of 'reputation management' on financial performance and other variables (trust, product, service quality, customer satisfaction, communication with stakeholders). As a result, the study revealed that reputation management has a positive effect on all mentioned variables, including financial performance and financial risk management.

In a study by Gomez et al (2013) was aimed to contribute to performance management literature by providing empirical evidence about some determinant factors that are likely to endow local governments with superior financial performance. Data came from a sample of Brazilian municipalities and refers to the period 2005-2008. The main conclusion of this investigation is that larger cities are more likely to manage revenue and expenditure better than are smaller cities, which aligns with the discussion of amalgamation versus fragmentation. This conclusion stems from the findings that in small municipalities have fewer conditions to improve financial performance due to the difficulty of raising and collecting taxes and of reducing expenditures, which makes their administrations far more dependent upon external sources of money.

Another contribution this paper proposed to theory and practice relates to the fact that in the strong-mayor form of local government, mayoral qualification is likely to have little effect upon performance. In Karakaya's (2019) study, in the example of Istanbul Metropolitan Municipality (IMM), corporate risk management practices, which is an analytical / systematic process in local governments, were examined with the Analytic Hierarchy Process (AHP) model, which is an academic, analytical and systematic model. Furthermore, in the study, it was clarified the points that need to be activated and improved in the municipality's corporate risk management process.

In another study conducted by Yildirim & Ayricay (2007), the role of capital markets in solving the financing problem of municipalities was examined. In the study, it was revealed that the municipalities suffer from financing difficulties compared to their increasing responsibilities and they resort to borrowing from domestic / foreign markets through bonds and financing bills in terms of risk management.

Finally, due to the narrowing of the borrowing opportunities of the municipalities, it has been proposed to establish local capital markets where local borrowing can be made. It was also highlighted that independent audit of the financial statements of the sub-companies of the municipality and their disclosure to the public will also contribute to obtaining the financing they need for their investments from different capital market instruments. In his study, Ergin (2020) examined the tax swap incentive within a new financial architect to stimulate the financing of municipalities through domestic debt instruments. In the study, it revealed that the tax swap is a technique that can be used to reduce the risks posed by international long-term bonds for municipalities, and since

municipalities are inadequate to cover their expenses, making the tax swap attractive in the bond issuance of municipalities and risk ratings of municipalities and municipal bonds. Moreover, for municipal bonds, it was suggested that it would be beneficial to establish a market and index within Borsa Istanbul-BIST.

In another study by Aksoy and Saglam (2020) found that internal control system (ICS) within the Istanbul Metropolitan Municipality Fire Service Department was effective. It also concluded that the effectiveness of ICS increases crisis management performance in pre-crisis, during the crisis and post-crisis stages, and there is a similar relationship between crisis management.

### **Key Risks to the Forefront in Local Governments**

Similar to businesses, local governments face the aforementioned risks while carrying out their own activities. In addition to the above risks, it is possible for local governments to be exposed to different types of risks due to their unique structure and characteristics. When looked specifically at IMM, the types of risks that are prominent and considered to be important for IMM are given below.

In summary, the main risks in terms of IMM are:

- i. *Dependency risk*
  - a. *Risk of dependency on shares from general budget revenue*
  - b. *Risk of dependence on rating grade*
- ii. *Borrowing risk*
- iii. *Exchange rate (foreign exchange) risk*
- iv. *Interest rate risk*
- v. *Credit risk*
- vi. *Liquidity risk*
- vii. *Maturity risk*
- viii. *Resource risk*
- ix. *Funding risk*
- x. *Foreclosure and collateral risk*
- xi. *Other risks (information system infrastructure, etc.)*

*Dependency risk:* It is one of the special risks that come to the fore in local governments, and in summary, it is divided into two as the dependency risk to shares from the central government general budget income and the risk of dependency on the rating.

*Borrowing risk:* It is the risk of managing debts obtained from internal and external sources in order to perform services.

*Foreign currency risk:* It is the financial risk that may occur as a result of an increase in exchange rates in borrowings in foreign currency.

*Interest rate risk:* It is the risk that costs will increase in variable cost loans. Interest is defined as the profit received in exchange for using the loaned money. In other words, it is the time value of money. Interest rate risk is the negative effect of the changes in interest rates in the market on the financial status of the companies. This risk is a type of risk arising from the losses that the enterprise may encounter due to the mismatch between the average maturities of assets and liabilities while re-evaluating the assets and liabilities. Due to the fluctuations in the interest rates in the market, possible loss of income, loss of equity, disruptions in cash flow, decreases in planned cash inflows occur. In other words, this risk refers to the changes in interest rates and the level of uncertainty brought about by these changes. High fluctuations in interest rates affect the decisions of market actors at the point of investment decisions and cause economic contractions.

*Credit Risk:* It is the risk of the credit limits being filled and not being able to obtain credit. This risk refers to the debtor's failure to fulfil its obligations on time.

*Liquidity risk:* It is the risk of cash shortage and assets not being converted into cash in a short time.

*Maturity risk:* It is the risk that borrowings are made short-term, long-term loans cannot be obtained and debts cannot be paid on time.

*Financing risk:* It is the risk of not meeting the cash need on time and under suitable conditions.

*Foreclosure and collateral risk:* These are the risks to the revenues of local governments at the borrowing stage.

*Other risks:* Risks arise from inadequate technological infrastructure, such as information technology infrastructure.

### **Public Financial Management and Control Law No. 5018**

Public Financial Management and Control Law No. 5018 creates the backbone and fundamental of the financial management and internal control in all public institutions in Turkey. According to the article 2, this Law regulates the financial management of public administrations within the scope of general government, consisting of public administrations within the scope of central government,

social security institutions and local administrations (PFMC, 2003). It has brought very important changes and innovations in financial management system of public institutions in Turkey. With this law, public financial management was rearranged. The aforementioned law and its secondary legislation reorganized the public financial management. The purpose of the law is to ensure accountability, transparency and the effective, economic and efficient acquisition and use of public resources in line with the policies and objectives included in the development plans in the light of global developments, standards and regulations programs, as well as to regulate the structure and functioning of public financial management, the preparation and implementation of public budgets, the accounting and reporting of transactions and financial control. The Law played an important role in the substantial renewal of the financial management in the public sector and bringing it in line with the European Union (EU) norms (Aksoy&Aksoy, 2020:29).

This Act, local governments in Turkey is not only to observe the public service at the local, but also on behalf of managing efficiently the budget at the local, mainly focuses on financial risk management. Within this focus, this Law expands the area of responsibility of local governments on financial risk management (Karakaya, 2019:68-69). In Turkey, a local management approach has been accepted based on General Accounting Act-Muhasebe-i Umumiye Kanunu" for many years. This Act, has expanded its network of Turkey's modernization of the system of local government and corporate work. In addition, this law has developed the financial management of Turkey's compliance with international concerned sense.

This law paved the way for the establishment of both financial and non-financial risk management system within the body of local governments, especially within the scope of EU membership, in order to increase the quality of local governments. In addition, the internal control system established within local governments enables local governments to be audited, at the same time, it enables them to supervise themselves within the framework of legal practices (Akcaay, 2011: 41).

Law No. 5018 is a regulation-oriented law. This law focuses largely on the effective / efficient use of public resources, leaving the financial management / supervision authority to local administrations, adopting the principle of transparency / accountability, planning internal / external audit mechanisms in public expenditures and creating integrity in budget / accounting practices (Arcagok et al., 2004: 19)

## **Research and Methodology**

### **Data**

In this study, the financial data of Istanbul Metropolitan Municipality selected as an example were used. In this context, data used, tables, reports and statistical information were obtained from the Revenues, Expenditures, Budget, Accounting and Audit and Finance Directorates affiliated to the Financial Services Directorate of the Municipality. The analysis tables within the scope of the study were created by examining this information together with the activity reports presented on the website and using them in risk analysis. Some calculations, tables and graphs were made, calculated and created by the researchers using the collected data. In addition to these, the data of the rating institutions Moody's, Fitch and JCR, which gave credit scores to the Metropolitan Municipality and are important in terms of credit rating, were also taken into consideration.

### **Defining IMM's Significant Financial Risks and IMM's Risk Performance in 2008-2018**

In this part of the study, in order to set an example for the financial risk management practice in local governments, important financial risks exposed by IMM are examined, respectively, and the impact of these risks on the relevant period's performance and IMM budget is examined.

#### ***Dependency Risks***

The risks in relations between the Republic of Turkey and Istanbul Metropolitan Municipality is considered to be two-sided. What we mean by the dependency risk is that the level of shares from the central government budget, which is the largest revenue item of IMM, depends on the central government decisions. So, there is a counterparty risk between the Central Government and IMM in terms of both supply and finance.

#### ***Risk of Dependence on Shares from the Central Budget Revenue***

In local governments, there is a dependence on the shares allocated to municipalities (incoming shares) from the general budget tax revenues. According to the Law No. 5779, within the framework of the regulation on the calculation, rate and principles of the said shares, special provincial administrations and municipalities are given a share over the total of the general budget tax revenues. The shares to be given to local governments and their rates are calculated on the net amount remaining after deducting tax returns from the total of the general budget tax revenues. "1.50 percent of the total of the general budget tax revenues is reserved for municipalities other than metropolitan municipalities, 4.50 percent for district municipalities in metropolitan cities, and 0.5 percent for special provincial administrations."

The main income item of IMM consists of the shares from the central government budget. Apart from this item, the revenues of the Municipality, which constitute the second main income item and defined as own income item, consist of the following items:

- i. Taxes and fees
- ii. Participation shares,

- iii. Enterprise and property revenues,
- iv. Donations and aids received
- v. Capital income
- vi. Interest income
- vii. Fines and civil penalties
- viii. Collections from receivables
- ix. Other miscellaneous income

In this section, the development of the Dependency Risk on Shares from the General Budget Revenue of the Municipality between 2008-2018 is examined. For this purpose, the distribution of the shares of IMM's own income sources and the shares from the general budget in the total municipal revenues over the years has been examined and reflected in the following table as a summary.



Figure 1: IMM Revenues; Source: jcrer.com

In the figure, it is seen that the main item of the revenues of the Istanbul Metropolitan Municipality is the shares provided by the Central Government. Apart from the deviation experienced in 2014, it is seen that the incoming shares, which are the main income item of IMM in general, are at the rate of 70% - 80% of the total incomes, and a significant part of the expenses are covered by the incoming shares. Consequently, it is understood that IMM is dependent on the central government budget for revenues in the aforementioned period, due to the fact that a significant part of the total income consists of incoming shares and these shares are indexed to the share from the central government budget. In addition, it is possible that the radical decisions to be taken by the central authority at the point of tax collection will affect the incoming shares and income level of the local government to a certain extent. Radical decisions mean unusual increases or decreases in incoming share rates, tax amnesty, changes in exemption and exception structures, new taxes or waiver of taxes.

On the other hand, due to the fact that tax revenues are subject to laws, it is observed that local governments only operate in the collection and sharing point. From this point of view, it is seen that there is another dependency between the central government general budget and the municipal budget in terms of the tax dimension of own revenues. As a result, it is seen that the incoming shares and own revenues, which constitute the revenues of IMM, are highly sensitive to the central government's decision to change the budget and shares, they are affected and there is a certain dependency risk.

### ***The Risk of Dependence on Rating***

Another type of risk that we can define as another kind of dependency risk is the risks created by the ratings given by credit rating agencies to local governments. There is a constraint that IMM's credit rating cannot exceed the country rating, and it creates the counterparty risk. Credit rating agencies attract attention as an valuable and determinant institutions in the changing world economy. These agencies evaluate the performances of businesses, institutions and countries in their financial operations and determine the financial reliability and investment ability values of the said institutions and countries based on these evaluations. Together with credit rating agencies, it is possible for institutions and states to determine a roadmap for financial supervision, reporting and guidance in the world financial system (Akbulak, 2012: 171-172).

Credit rating agencies are important in terms of encouraging foreign investment, mobilizing savings, ensuring stability, trust and transparency in terms of the financial system (Yildiz, 2016: 522):

In connection with The IMM, it is seen that different instruments are used to meet the financing needs of investments that require high cost and advanced technology. One of these is the external borrowing method obtained from international sources within the framework of long-term project finance. The legal basis of this requirement regarding local governments is based on the article 3/c of the Public Procurement Law Numbered 4734. Based on this article, work is started on the credit rating with the permission of the Municipal Council. In this framework, annual financial evaluation meetings are held with world-renowned rating (credit rating) organizations (Moody's Investors Service, Fitch Ratings and JCR-ER) in order to measure the credibility of the institution as the Local Government. Within the framework of the examination and evaluation made in these meetings, Credit institutions publish comprehensive explanatory reports on the financial statements of IMM as a reference to investors and creditors. The following table compares the results of ratings given by rating agencies to IMM for the relevant period and is given in terms of Turkey.

**Table 2:** IMM Credit ratings (2014-2018)

Rating Company		YEAR									
		2014		2015		2016		2017		2018	
		TURKEY Rating	IMM Rating	TURKEY Rating	IMM Rating	TURKEY Rating	IMM Rating	TURKEY Rating	IMM Rating	TURKEY Rating	IMM Rating
Fitch		BBB-Stable	BBB-Stable	BBB-Stable	BBB-Stable	BBB-Negative	BBB-Negative	BB+ Stable	BB+ Stable	BB-Negative	BB-Negative
Moody's		Baa3 Negative	Baa3 Negative	Baa3 Negative	Baa3 Negative	Ba1 Stable	Ba1 Stable	Ba1-Negative	Ba1-Negative	Ba3-Negative	Ba3-Negative
JCR-ER		BBB-Stable	BBB-Stable	BBB-Stable	BBB-Stable	BBB-Stable	BBB-Stable	BBB-/Negative	BBB-/Negative	BBB-Stable	BBB-Stable

Source: IBB 2019

In summary, from the examination of the table, it is the point that IMM and country ratings are parallel to each other. Another result is that the ratings given by the rating agencies Fitch and Moodys are below the “investable” level, whereas the ratings given by the JCR-ER maintain the “investable” level. In addition, another result has been understood that the above-mentioned limitation of not passing the country score is still valid in practice. Therefore, it should be underlined that there is a risk of dependency between on the rating score for IMM and on the rating score for the country in the mentioned period.

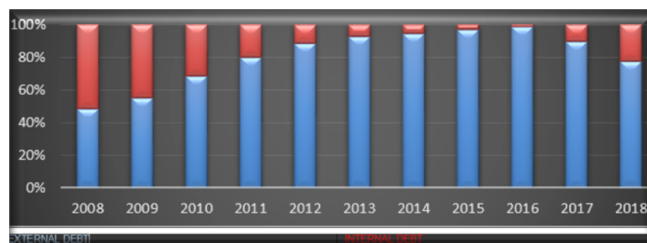
**Borrowing Risk**

In this section, the borrowing risk of IMM in the mentioned period is examined. Local governments have been given the opportunity to borrow in accordance with the relevant provisions of the following legal legislation. The duties and responsibilities of municipalities (transportation, zoning, water and sewerage, solid waste management, police and fire services, cultural and social activities, etc.) are defined in Article 14 of the Municipality Law No. 5393. Metropolitan and district municipalities can borrow within the scope of the authorities given to them when they are deemed necessary while performing these services. In the aforementioned period, IMM preferred the way of borrowing in order to meet its financing needs while fulfilling its duties and services it was responsible for.

When the areas of borrowing made by IMM are examined, according to the sub-clause (b) of the first paragraph of the 68th article of the Municipal Law No. seems to be making debt. External borrowing is made on the basis of Article 3 of the Law Numbered 4749 on the Regulation of Public Finance and Debt Management.

There are a number of procedures that must be followed in order to make external borrowing. First of all, the approval of the municipal council is required. Based on the decision of the council, a permission to borrow is requested from the Ministry of Treasury and Finance. With the permission to be given, "foreign borrowing" is made. In addition to foreign borrowing, IMM, like all local governments, has the opportunity to use "domestic borrowing" for its current and investment services with various instruments in accordance with the following legal legislation provisions.

Article 68 of the Municipality Act Numbered 5393 explains the procedures in which municipalities can make domestic borrowing. When examined in the period between 2008-2018, it is seen that IMM has both foreign borrowing and domestic borrowing within the framework of the relevant laws, to the extent required by the duties and responsibilities that IMM is obliged to fulfill to meet the common needs.



**Figure 2:** Distribution of internal and external debt from financing institutions

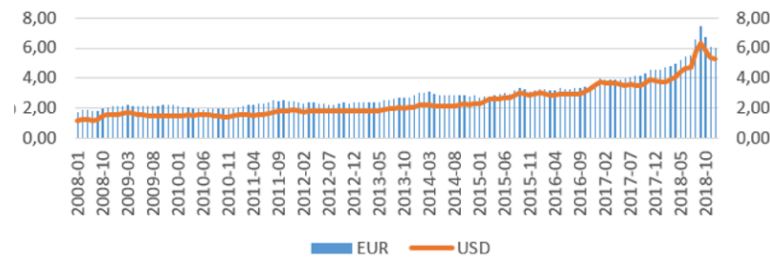
In the figure, the sum of the short-term liabilities account in the IMM balance sheet and the bank loans in long-term liabilities are considered. The amounts in the account of financial debts in the distinctive public administrations refer to the money borrowed from ISKI, its affiliate under the law, and no interest is applied to them. Therefore, these debts were not considered. In the figure, domestic and external debt comparison is made within the total debt. As can be seen, while the domestic borrowing ratio used as working capital was around 50% in 2008; It declined to 20% in 2018. External borrowing used within the scope of project financing increased from 50% to 80% in 2008. The lowest domestic borrowing was in 2016 and the highest in 2008. The lowest external borrowing was in 2008 and the highest was in 2016. Foreign borrowing gave an outlook of over 60% in 2010 and 2018. Between 2011 and 2017, the external borrowing rate is over 80%. It is seen that as of 2017, borrowing started to turn in favor of domestic borrowing again and the domestic debt ratio started to increase.

As a result, it was understood that IMM benefited from both types of borrowing in the mentioned period and went to both foreign and domestic borrowing in this direction. In addition, it is observed that a significant part of total borrowing consists of foreign borrowing and there is a borrowing risk in the relevant period. Although the borrowing method is an effective method to meet the resource requirements in the short term, it also brings some risks. The magnitude and severity of these risks are related to the preferred methods of borrowing. In the period under review, IMM generally preferred external borrowing in terms of borrowing method. The external borrowing method refers to the currency and interest rate risk as well as the credit risk. In addition, it is necessary to consider the risks arising from the maturity structure of the borrowings.

**Currency (Foreign Exchange) Risk**

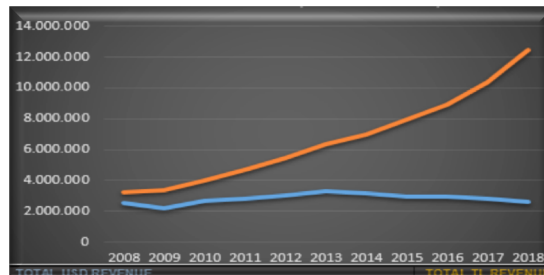
One of the important risks that IMM is exposed to is the exchange rate risk. In summary, currency risk is a type of risk that occurs as a result of fluctuations in foreign exchange prices. Nowadays, rapid changes in conjunctural policies, global financial difficulties and hard decisions made by countries about each other cause rapid and broadband fluctuations in exchange rates from time to time. Exchange rate fluctuations are greatly affected by internal / external speculative and political events. In order to evaluate the currency risk properly, it will be necessary to look at the course of the EUR / USD exchange rates in the relevant period and the USD-TL ratio of the shares from the central general budget of IMM in the same period.

The following figure shows Turkey in the period from 2008-2018 in the course of the Euro and the USD exchange rate.



**Figure 3:** Exchange rates; Source: tcmb.gov.tr

In the figure, the change in EUR and USD exchange rates as of 2008 can be followed. It is observed that TL depreciated by 4.5 times against EUR and USD in 10 years. In this context, it means that the debt stock made in foreign currency increased by an average of 4.5 times.



**Figure 4:** Central government shares (TL and USD) Source: gib.gov.tr

It was explained above that foreign debts arising from investment projects have a large share in the borrowing structure of IMM. In this context, while IMM carries out its investment projects by borrowing in foreign currency, the revenues of the municipality are in TL. Therefore, shock fluctuations in exchange rates due to various reasons will cause IMM revenues to shrink in terms of foreign currency. In this case, it is obvious that payment difficulties arising from exchange rate will arise. Looking at the figure, while there was an increase in municipal revenues on TL basis over the years, revenues in dollar terms decreased due to the increase in exchange rates. This situation shows that the majority of the shares from the general budget are used in debt payments and the risks arising from the exchange rate increase. Due to its borrowing structure, IMM is also affected by exchange rate movements and is exposed to unexpected debt burden in increases. This causes disruption in investments and an additional increase in debt due to the increase in exchange rates. As a matter of fact, IMM was affected by the increase in exchange rates within the scope of the debt burden and was exposed to an average of 4.5 times additional debt burden due to exchange rate movements. Therefore, it is seen from the table that the exchange rate risk is valid for the municipality in the period examined.

**Interest Rate Risk**

Another important risk that IMM is exposed to is the interest rate risk. In this type of risk, changes in interest rates in the market negatively affect the financial status of businesses. In order to evaluate the interest rate risk, it is necessary to examine several



variables and various financial data in the relevant period. These are the changes in LIBOR and EURIBOR interests, which the Municipality has benefited from, by years, the course of the TL Interest Rates, the course of IMM's domestic debt / external debt distinction and the course of the interests paid in terms of domestic debt external debt and the rate of Interest Expense to General Expenses by years. In the analysis of the data below, in summary, mostly variable interest rates are seen for financing the investments of IMM. In this context, it is seen that the fluctuations in LIBOR and EURIBOR rates, which are considered as interest in foreign debts, also affect the debt burden of IMM. Although EURIBOR rates have been at negative levels for a long time, financial institutions balance the differences by keeping the margins high. In domestic borrowing, increase in interest rates increases borrowing costs and increases the interest rate risk of IMM to a certain extent.

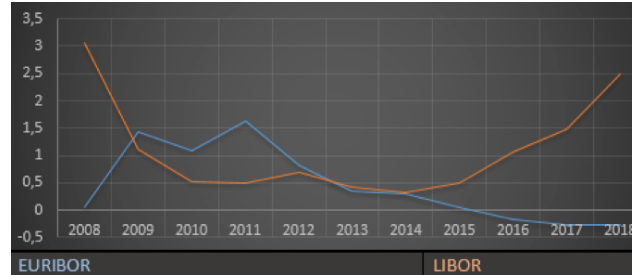


Figure 4: LIBOR and EURIBOR Rates; Source: gib.gov.tr

The figure shows the changes in LIBOR and EURIBOR rates over the years. In general terms, while LIBOR rates have changed in the upward direction since 2015, EURIBOR rates have changed up to negative. As mentioned above, although EURIBOR rates are at minus levels, interest margins and the fluctuations in these affect IMM external borrowing costs to a certain extent. For example, with the global financial crisis that started in the United States in 2008 and affected the whole world, the EURIBOR ratio increased to 5 levels and caused additional burdens on foreign debts. The possibility of repeating this situation brings along additional interest rate risk and costs.

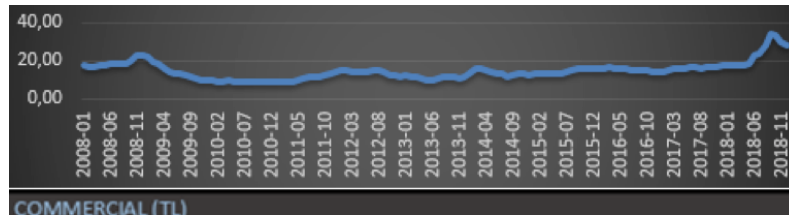


Figure 5: Interest rates; Source: tcmb.gov.tr

The figure shows the interest rates to be incurred against domestic borrowing. Considering the years, the interest rates, which were in the band of 10-15 percent on average, although the effects of the global crisis in 2008 were limited, the interest rates increased to 22% and reached 35% with the economic crisis in 2018. This means that approximately one third of the interest cost of a loan is incurred. IMM borrows at current interest rates while borrowing from domestic markets, and borrowing at variable interest rates in foreign borrowing, thus it is exposed to the interest rate risk arising from fluctuations. In addition, this situation causes an increase in interest expenses, which is the cost of financing. In summary, the figure shows the costs that IMM has to bear in return for domestic and foreign borrowing, namely the interest rate risk. In other words, it shows borrowing costs that vary depending on the size of the borrowings made and the interest rates. In the period between 2011 and 2017, domestic debt interest payments remained below foreign debt interest payments. The reason for this deviation is the successful privatization of the municipal company IDO in 2011 with a successful operation and the reduction of the internal financing cost.

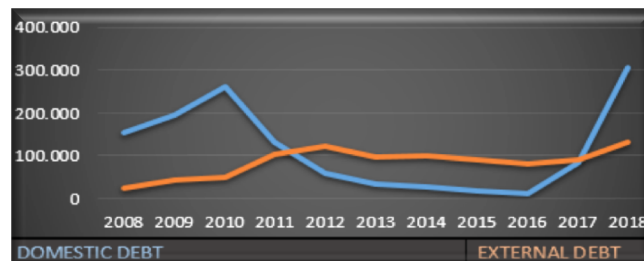


Figure 6: IMM's interest expenses; Source: tcmb.gov.tr

With this sale, it was observed that interest expenses followed a stable decline until 2016. However, as of 2016, it has started to rise again. The main reason for this is the increasing financial burden needed for investments. Especially in 2018, due to the impact of the crisis, the 10-year course of interest rates peaked and the costs incurred in domestic borrowing increased. Since 2017, it is seen

that external debt interest expenditures have exceeded domestic debt interest expenditures and both of them have a serious upward trend. The figure shows the ratio of interest costs within the IMM expenditure budget for the period examined. When the figure is analyzed, it is seen that the share of interest expenditures in total expenses decreased between 2009 and 2013.

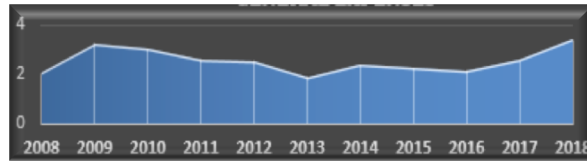


Figure 7: Interest expenses to general expenses; Source: gib.gov.tr

The increase in domestic and foreign financing needs causes an increase in interest costs, which in turn causes an increase in the share of interest rate expenses in the total expenditure budget. The interest cost incurred as a result of the changes in interest rates in borrowing made in recent years caused the expense budget to realize at the level of 3.5%. As a result, when all the tables are evaluated together, it is seen that there is a certain amount of interest rate risk for IMM in terms of the determined period, the effect of this risk has relatively decreased in the period between 2011 and 2017, on the other hand, the interest rate risk has increased significantly and has started to increase significantly since 2018.

**Credit / Liquidity Risk**

In this section, credit/ liquidity risk, which is important for the municipality, is discussed together. The course of the credit risk and the liquidity risk of the municipality in the period analyzed. When the borrowing structure is examined, it is seen that the average of 75% of the debts during the said period consists of financial debts. While it approached 60% in 2008, this rate reached 76% in 2018. This supports the risk of credit risk, especially as a result of high levels of increases in exchange rates due to foreign exchange debts in financial debts. In the period examined, the cost of the debt burden increased to levels that could not be lifted as a result of a possible excessive fluctuation in exchange rates or interest rates, and the IMM, whose revenues were not at a sufficient level, would be exposed to credit risk when it was considered that it could not obtain its expected revenues from the shrinking markets. included.

**Maturity Risk**

Another point to be considered in borrowing is the maturity structures and maturity risk. In order to minimize this risk, long-term borrowings are preferred in borrowings, especially since investment projects are long-term investments and it will take time to start and operate the investment. Otherwise, it is obvious that making such investments with short-term borrowing will put municipalities at maturity risk at the point of repayment. In the period examined, it is observed that IMM observes this distinction when borrowing and borrowed capital investments in the long-term.

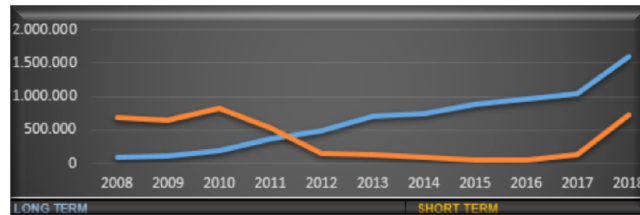


Figure 8: Long-term domestic and external bank payables; Source: gib.gov.tr

In the figure, between 2011-2017, short-term domestic debt and bank debt followed a course below short-term external debt. Due to the successful privatization of IDO in 2011, there is a decrease in the short-term domestic bank borrowing rate. It followed a stable course until 2017. As of 2017, it has started to rise again. Especially foreign credit borrowing tends to increase since 2008 in the context of the financing of transportation and infrastructure projects. In the 10-year period, the short-term external bank debt stock increased more than the domestic debt stock. When evaluated in terms of liquidity risk, the current ratio within the liquidity ratios of IMM showed a decreasing trend during the said period, indicating the weakness of the possibility to pay short-term debts.



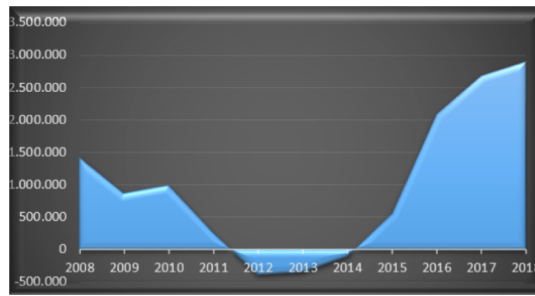
Figure 9: Long-term domestic/external debt; Source: gib.gov.tr

Considering the financial analysis and evaluations as a result of the examination of the figure, it is seen that the long-term external loan borrowing within the scope of the project financing increased approximately 10 times from 2008 to 2018, and the long term domestic debt increased approximately 5 times from 2008 to 2018 due to the increase in investments. It is beneficial to prepare the financial statements such as local governments accounting procedures and balance sheets, income and expenses in TL in local currency and to make the tenders of the projects to be made in TL in the light of the legal regulations on this subject. However, since the financing of the project is made in currency, it is possible that there will be an increase in the balance sheets due to the increase in the exchange rates of foreign credit borrowings.

When examined in general terms, most of the bank debts are long-term domestic and foreign debts for financing investment projects. In this context, it is observed that there is no maturity risk regarding maturity structures, since long-term borrowing is made by applying a successful and accurate policy in financing investment projects.

### **Resource Risk**

Another prominent type of risk for IMM is resource risk. For this reason, the course of IMM's financing needs in the period between 2008-2018 was examined. It is possible for IMM to continue its investments and to complete these investments by providing the required resources. The fact that all currently ongoing projects are financed through the same resource and method and that they include risks, creates a certain pressure on the future financing requirement and naturally increases the financing costs to a certain extent.



**Figure 10:** Financing requirement (thousand TL); Source: gib.gov.tr

In the previous pages, it was explained in detail that he preferred the borrowing method in the financing of IMM investments. At this point, in the period between 2011-2014, the need for funding has significantly decreased with the successful privatization operation of IDO. It started to rise again after 2016 and peaked especially in 2018. It is seen that IMM's increasing financing needs with borrowing will bring risks such as exchange rate, interest and credit, and the costs to be incurred in a possible risk realization will be high. At this point, IMM may prefer to benefit from alternative financing sources other than borrowing within the framework of the legislation in order to reach the financing resources it needs and to reduce its current or possible risks.

### **Seizure and Collaterals Risk**

As the demand for financing intensifies, costs and financial liabilities increase. As a natural consequence of this, foreclosure practices may occur for income items (for example, the advertising revenues of the municipality) apart from the interest burden while carrying out domestic and external financing activities. This situation causes restrictions on existing goods and commercial transactions to a certain extent. As a municipality, the increase in guarantees is reflected in the costs of new financing activities. As a result, it can be said that such transactions increase the costs and narrow the fiscal space of the Municipality to a certain extent.

## **Conclusion**

The terminology of the risk is; to stand against struggle and taking responsibility to achieve certain principles, against the negativity in the possible future. In the same time, risk is an element that can bring many advantages in addition to various difficulties. In order to reach business goals and achieve success, it should be managed and evaluated financial and unsystematic risk that are exposed. Risk management maximizes optimistic risk while minimizes negative risk, enabling institutions to take as much risk as they can bear. As an objectively described, valued and good managed important risks that imposed, can provide to achieved planned goals and, successfully and healthy sustained.

The purpose of this study was to examine impact of the financial risks local governments are exposed to within the scope of financial risk management practices. Istanbul Metropolitan Municipality (IMM) was selected for this study because it is the largest local government with the highest budget. In the study, the development of financial risk performance of IMM between the years 2008-2018 was examined in the light of the risks IMM is exposed to. The risks IMM faces and were used in this study include dependency risk, Dependency risk to shares from general central budget revenue, rating grade risk, borrowing risk, exchange rate risk, interest rate risk, credit / liquidity risk, maturity risk, resource risk, financing risk, foreclosure and collateral risk. Financial data obtained from the financial statements and yearly reports of IMM were used to examine the performance of the listed risks and the effects they have on the budget of IMM. The results of the analyses done for this study are summarized as follows:

*The Risk of Dependence on Shares from the General Central Budget Revenue:* Within the period examined, the shares from the head office budget revenues was found to constitute 70% -80% of the total revenues of IMM per the law and the municipality's own revenues ranged between 20-30%. Therefore, in the said period, it was observed that IMM was directly dependent on the central budget in terms of revenues, so in this period, the risk of addiction was high in terms of counterparty risk.

*The Risk of Dependence on the Rating Grade:* The credit rating cannot exceed the country rating. Due to this constraint, it was understood that the IMM rating and the country rating were parallel to each other within the study period, while Fitch and Moodys scored below the "investment grade" threshold, the JCR-ER maintained the "investment grade" level. It was understood that the restriction of not passing the country score was still valid in practice and there was a risk of dependence on IMM's rating score in the study period.

*Borrowing Risk:* IMM had borrowing risk because a significant portion of its total borrowing consists of foreign borrowing so it was significantly affected by the increase in exchange rate and it was exposed to additional debt burden, hence the existence of exchange rate risk within the study period.

*Interest Rate Risk:* IMM borrows at current interest rates when borrowing from domestic markets, and at variable interest rates when borrowing from foreign markets. Therefore, it was understood that IMM was exposed to the interest rate risk arising from fluctuations in the rate within the said period. In addition, this situation causes an increase in interest expenses, which is the cost of the said financing. It was observed that the debt burden of the IMM was affected to a certain extent in the said period and the interest rate risk saw a significant increase in 2018 and reached its highest level.

*Credit / Liquidity Risk:* It was understood that 75% of total debts consisted of financial debts on average and this ratio increased to 76% in 2018 while it was close to 60% in 2008. It is understood that there is a liquidity risk throughout the period according to the current ratio. It is evaluated that the credit and liquidity risks that started in 2018 due to the high increases in the exchange rate due to foreign currency debts may increase and continue in the upcoming period.

*Maturity Risk:* It is observed that IMM finances capital investments through long-term domestic / foreign borrowing in a positive sense in the period examined, therefore there was no maturity risk regarding the maturity structures.

*Resource Risk:* It is noteworthy that IMM has a resource risk in terms of sustaining and completing the investments undertaken. This risk, which peaked in 2018, is expected to remain important in the coming period.

*Seizure and Collaterals Risk:* It was understood that IMM was exposed to this risk during the period.

*Information System Infrastructure Risk:* This type of risk in the category of other risks has also appeared as a type of risk that should be seriously dwelled on, taken precautions and developed, especially in the upcoming period.

In conclusion various evaluations and suggestions as below were made for effective financial risk management. It is beneficial for the municipality to take measures to improve, diversify and increase all other income items and to develop new methods in order to reduce the dependency risk. In addition, it is important to ensure the income-expense balance of the institution in a way to reduce the dependency risk. Therefore, it is considered that it is beneficial to increase incomes and reduce expenses, and to ensure corporate governance and financial risk management efficiency in making activities more efficient. Regarding the interest rate risk, it is considered appropriate for IMM to manage the risk process in a balanced and sustainable manner within the scope of acceptable risk limits and risk appetite. Due to the fact that borrowing is from different foreign currency units, it is possible that the interest to be created by the foreign currency on the loans received will be exposed to risk effects. Therefore, it is beneficial to diversify the interest rate risk created by each currency and monitor different interest rate risks with periodic reporting. Furthermore, these additional suggestions below are also made for good financial risk management.

- (i) *More effective and efficient use of the key performance indicator system for risk limits within the scope of the mentioned risks, Local governments especially avoid populist approaches away from political concerns,*
- (ii) *Establishing IT infrastructure and financial statements in international standards for measuring risks,*
- (iii) *Instant monitoring, reporting and monitoring of the risks exposed to, and periodic submission to senior management,*
- (iv) *Introducing the investments in national and international fair and commercial promotion tours (roadshows) in line with the determined borrowing plans, with the possibility of positive reflection on financing costs.*
- (v) *Investigating the feasibility of alternative risk aversion instruments in order to fix the exchange rate and interest rate risk due to the borrowing provided within the scope of the project financing,*
- (vi) *Investigating before the relevant authorities whether it is possible to increase the diversity of financial products in terms of legislation,*
- (vii) *Increasing efforts to increase the volume and diversity of own revenues so that local governments are less affected by macroeconomic developments,*
- (viii) *Creating a realistic and applicable strategic planning for financing investments in terms of the upcoming process*
- (ix) *Establishing a proactive, systematic and continuous integrated risk management system within the body of IMM that understands and manages all the risks faced by the municipality from an institutional perspective.*

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