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Raffaele Visconti

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The Interest Margin of Italian Banks in 2021 and 2022

Raffaele Visconti, PhD

Expert in the subject of Corporate Finance at the University of Naples "Federico II". Naples. Italy.

Corresponding Author:

Raffaele Visconti

ravisco@libero.it

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ABSTRACT

This study focuses on the analysis of the interest margin (MI) of Italian banks listed on the MTA (Mercato Telematico Azionario) of the Italian Stock Exchange, for the years 2021 and 2022. The net interest margin is represented by the difference between interest income on uses and interest expense on collection operations. This indicator is widely recognized as a measure of operational efficiency within credit broking. In the context of this analysis, the trend of the inflation rate in the euro area and of the ECB reference rates will also be examined, for the period from 2013 to 2022. The restrictive monetary policy of the ECB, which began during of 2022 and continued with a certain intensity, was in my opinion one of the main causes of the increase in the interest margin. The scientific literature on the subject of interest margin and negative nominal interest rates will be examined. Finally, we will explore the evolution of the composition of financial instruments held by retail customers at Italian banks over this period.

Questa ricerca analizza il Margine d'Interesse (MI) delle banche italiane quotate sul Mercato Telematico Azionario di Borsaitaliana, per gli anni 2021 e 2022. Il Margine d'interesse è calcolato facendo la differenza tra gli interessi attivi che le banche ottengono sulle operazioni di impiego di fondi e gli interessi passivi corrisposti sulle operazioni di raccolta. Questo indicatore è una misura dell'efficienza operativa con cui viene svolta l'attività di intermediazione creditizia della banca. Nel contesto di questa analisi viene esaminato l'andamento dell'inflazione nell'area euro e i tassi di riferimento della Banca Centrale Europea, per il periodo che va dal 2013 al 2022. La politica monetaria restrittiva della BCE, cominciata nel corso del 2022 e continuata con una serie di rialzi dei tassi di riferimento è, secondo la mia opinione, una delle principali cause dell'aumento del Margine d'Interesse. Verrà analizzata la letteratura scientifica relativa al Margine d'interesse e ai tassi d'interesse nominali negativi. Nella parte conclusiva verrà esaminata la composizione degli strumenti finanziari detenuti dalla clientela *retail*, in deposito e amministrazione presso le banche italiane, commentando la loro diversa composizione nel tempo.

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Keywords: Net Interest Margin; ROE; ROA; negative interest rate

1 – Introduction

In this research I aim to analyze the interest margin of the Italian banks listed on the MTA (Mercato Telematico Azionario) of Borsaitaliana, in the years 2021 and 2022. The interest margin is represented by the difference between the interest income accrued on the banks' loans and interest expense accrued on collection operations. To calculate it in percentage terms and therefore make the margins of banks of different sizes comparable, the ratio between the interest margin and the average of the loans made in the year is calculated. This indicator is considered a measure of the operational efficiency with which the bank's credit intermediation activity was carried out. In the next paragraph we will examine the trend of the inflation rate in the euro area and of the ECB reference rates. The relevant scientific literature on the subject of interest margin will then be analysed. Subsequently, the possible causes of the significant variation in MI which occurred in the two years considered will be analysed. Finally, we will proceed with a brief examination of the evolution of the composition of financial instruments deposited by retail customers in custody and administration at Italian banks

2 – Source of data and objectives of the research

Data on inflation rates from 2013 to June 2023 were taken from the ECB website. The same thing applies to the reference rates of the European Central Bank and their variations over time. The data referring to the interest margin of the Italian banks listed on the Mercato Telematico Azionario of Borsaitaliana are extracted from an excel file, Table 3.3, attached to the Consob annual report for the year 2022. The data regarding the amount of the financial instruments assets held in custody and administration at Italian banks, with reference to retail customers, are taken from Table 2.1 attached to the Consob Annual Report for the year 2022. Other data regarding collections and investments were taken from the Annual Report of the CONSOB for year 2022. The aim of this research is to:

1) Analyze the significant increase in the interest margin of Italian banks listed on the MTA between 2021 and 2022 and examine the causes.
2) Examine the composition of retail customers' financial investments from 2013 to 2022 and analyze the possible causes of the variations based on the ECB reference rates in the same period.

3 – Methodology of paper

The inflation rate in the euro area, measured by the HICP inflation rate, began an ascending phase in 2021, reaching over 10% per year during 2023. Despite having undertaken a decline, with reference to June 2023, it is found at values close to 5.5%, still high for the ECB's objective of maintaining, in the medium term, values close to 2% per year (Figure 1).

To counter this phenomenon, the ECB has undertaken a restrictive monetary policy, raising the reference rates several times. The ECB can intervene on rates through three types of operations. The marginal lending facility rate, which is applied to overnight loans granted to banks.

The main refinancing rate, applied to central bank financing operations, other than overnight ones. The deposit rate is applied to the deposit of funds that credit institutions make with the ECB.

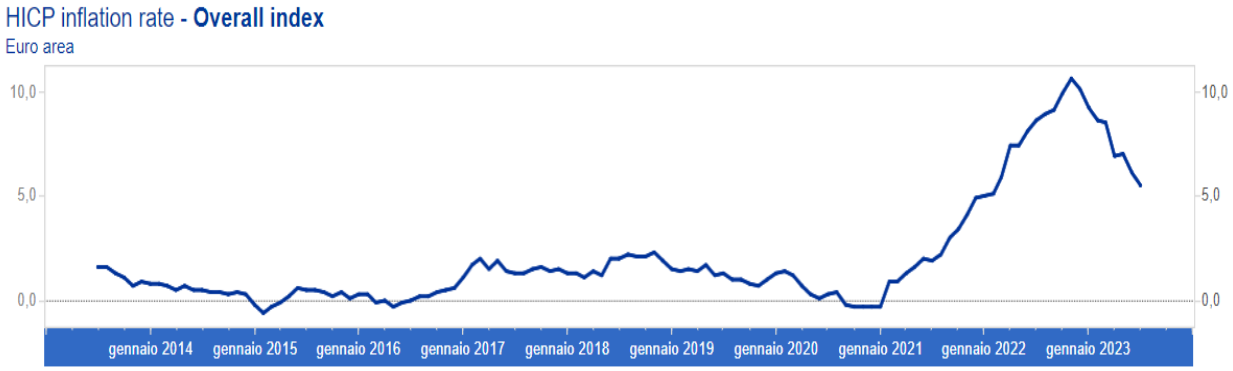

Fig. 1 – European Inflation (Source: Our elaboration from Dataset ECB)

Table 1 – Interest Rate ECB (Source: Our elaboration from dataset ECB)

Date	Effect from	Deposit Facility	Main Refinancing Operation	Marginal Lending Facility
2013	8/5/13	0,00%	0,50%	1,00%
2013	13/11/13	0,00%	0,25%	0,75%
2014	11/6/14	-0,10%	0,15%	0,40%
2014	10/9/14	-0,20%	0,05%	0,30%
2015	9/12/15	-0,30%	0,05%	0,30%
2016	16/3/16	-0,40%	0,00%	0,25%
2019	18/9/19	-0,50%	0,00%	0,25%
2022	27/7/22	0,00%	0,50%	0,75%
2022	14/9/22	0,75%	1,25%	1,50%
2022	2/11/22	1,50%	2,00%	2,25%
2022	21/12/22	2,00%	2,50%	2,75%
2023	8/2/23	2,50%	3,00%	3,25%
2023	22/3/23	3,00%	3,50%	3,75%
2023	10/5/23	3,25%	3,75%	4,00%
2023	21/6/23	3,50%	4,00%	4,25%
2023	2/8/23	3,75%	4,25%	4,50%

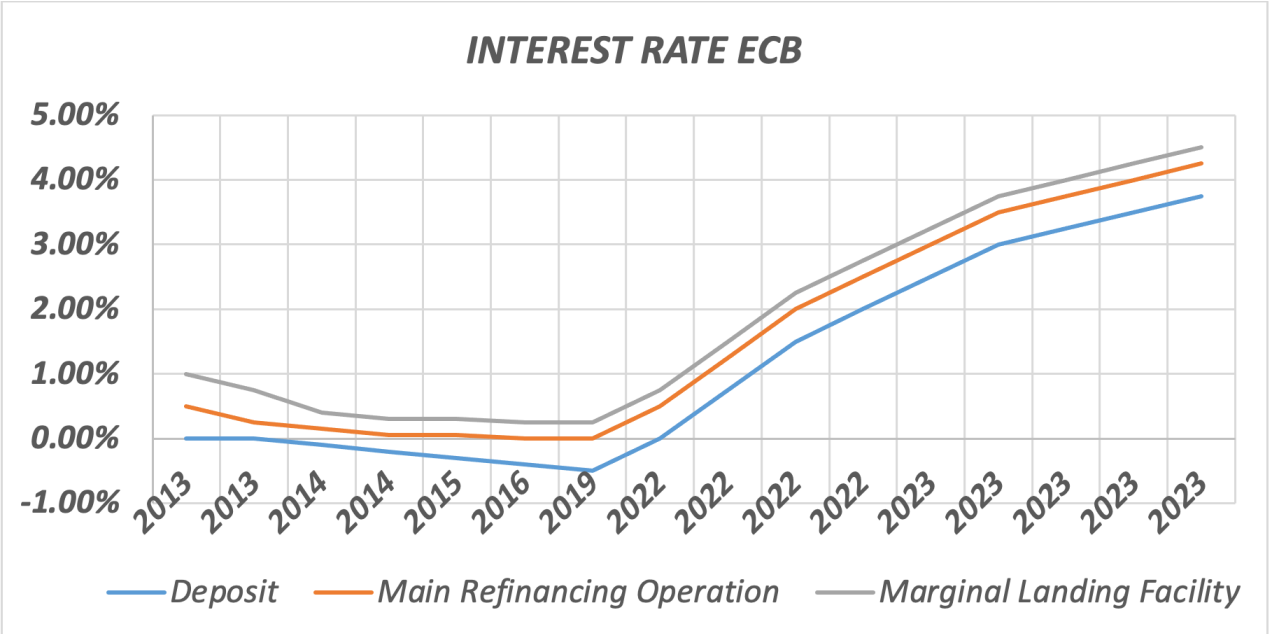

Fig. 2 – Interest Rate ECB (Source: Our elaboration from dataset ECB)

From the analysis of Table 1 and by examining the graph in Figure 2 a very unusual phenomenon emerges, namely the negative rates on deposits made by credit institutions with the ECB. In 2019 this rate was – 0.50%. In the intentions of the Central Bank of the euro area, it was intended to discourage the deposit of sums at the central bank, to channel them towards financing businesses and families.

The remuneration of sight deposits with credit institutions, in particular the credit balances for customers on bank accounts, obtained interest rates close to, if not equal to, 0%. Some large credit institutions hypothesized applying a negative nominal interest rate for larger sight bank deposits. One of the most important Italian credit institutions applied for a short period a negative nominal interest rate, -0.50%, for accounts that had an average balance of more than one million euros. Financing operations for businesses and families, when carried out with technical forms that provided for the variability of the interest rate, took place at particularly convenient rates for borrowers of funds. This favored the taking out of mortgages, often long term, by families to purchase their first home or, in any case, to make real estate investments. Businesses obtained more favorable conditions for borrowing. The subsequent rapid increase in these rates created difficulties for families and businesses in repaying the loans obtained, making it necessary, in many cases, to extend the residual life of these loans, to contain the periodic repayment instalment. It is beyond the scope of this work to examine the causes of this inflationary process, which however affected not only the European context but also that of other countries, particularly the USA, where it assumed similar growth dynamics, but partly different causes.

4 – Reference scientific literature

Banks play a leading role in financial intermediation, especially in the economies of continental Europe where the financial system is "Bank oriented". Research carried out by Levine, 1997, demonstrated how the efficiency and effectiveness of financial intermediation has an important

effect on economic growth. A study by (Demirguc-Kunt & Huizinga, 1999) highlighted the main elements that could have an effect on the NIM (Net Interest Margin) of banks. The macroeconomic conditions, the structural characteristics of the bank, the implicit and explicit methods of taxation of deposits, deposit insurance and legal protection in favor of creditors were tested. In work of (Dumicic & Ridzak, 2012) the MI and other indicators of the profitability of banks operating in Central Europe and Eastern Europe from 1999 to 2010 are analysed.

From the research a different situation for the years preceding the serious economic-financial crisis of 2008 and the following years. Before 2008 we have low MIs, motivated by economic stability, consistent capital inflows, a low level of inflation and short-term interest rate. The study by (Lesmana, 2021) concerns the factors that produce an effect on the NIM of Indonesian banks, referring to a period from 2009 to 2015, therefore following the 2008 crisis. The following evidence is found in it. The increase in the Total Bank loan has a positive and significant correlation on the NIM. Furthermore, bank size (SIZE) and Capital Ratio (CAR) has a negative and significant correlation on NIM.

In a recent research (Argimon *et al*., 2023), analyzing data from 31 OECD countries, between 1995 and 2018, highlight a positive correlation between interest rates and interest margins. Previously, other scholars (Busch & Memmel, 2017) found a positive correlation between interest rates and the interest margin of German banks. This research, which analyzes the German banking system for a period of over 40 years, from 1968 to 2013, finds that "An increase of 100 basis points in the interest rates level causes the net interest margin to widen by around 7 basis points". A research (Bikker & Vervliet., 2017) investigate the impact of the unusually low interest rates leadsto a decrease in the net interest margin. The period examined goes from2001 to 2015.

Consequently, a low level of interest rates generally has a reducing effect on bank profitability. Most scholars use ROA (Return on assets) and ROE (return on equity) as indicators for the profitability of banks. During and after the 2008 financial crisis, the greater macroeconomic risks, the increase in insolvencies and the pressure exerted by the regulatory bodies to increase the equity capital of the banks, precisely in order to guarantee stability in the banking system, led to a reduction in the profitability of the banks. A research (Dietrich & Wanzenried, 2011) analyzes the profitability of 372 Bank in Switzerland over the period from 1999 to 2009.

The study show that profitability explained for five factors. Operational efficiency, the growth in loan volume, funding cost, the business model and effective tax rate. Highlights that negative rates are definitely a stimulus for the economic system, since commercial banks reduce the rates applied on lending transactions. On the other hand, the compression of the interest margin leads to a decrease in the profitability of the banks and therefore their possibility of increasing the net worth through self-financing policies (Ulate, 2021). Credit institutions could slow down the disbursement of loans so as not to increase their level of financial leverage. Recent research (Molyneux & Oth., 2019), using data from 7,359 banks in OECD member countries for the period 2012-2016, highlights how the effect of negative nominal rates, NIRP, on the interest margin of banks depends on several factors. The main ones are: the size of the bank; the business model adopted; the characteristics of that country's banking system; the actual level of competition between banks and the different composition of fund use operations between fixed and variable rates. It is highlighted that banks that are more oriented towards the provision of financial services, remunerated with commissions, suffer less than the others in terms of reduction in profitability.

5 – Data analysis

Examination of Table 2 shows a notable increase in the MI which, in absolute value, is +5.3 billion euros, equal to +20.46%. Interest income accrued on loans has a positive change of 8.4 billion euros, equal to +24.13%.

Table 2 - Interest Margin of Italian banks listed on the MTA (Source: Our elaboration from Dataset Consob 2022)

	2022	2021
Interessi Attivi e Dividendi	**43.2**	**34.8**
Prestiti e depositi	35.7	28.1
Investimenti in Titoli Finanziari	1.3	1
Altro	6.2	5.6
Interessi Passivi e oneri assimilati	**12**	**8.9**
MARGINE D'INTERESSE	**31.2**	**25.9**

Interest expense and other charges related to collection increased by 3.1 billion euros. The restrictive policy of the ECB, which began on 27 July 2022, brought the rate on deposits at the Central Bank to 0%, compared to the previous -0.50%. The rate on main refinancing goes from 0% to +0.50%; Overnight operations went to +0.75% from the previous +0.25%. During 2022, three further upward interventions will follow in the months of September, November and December.

The Annual Report of the Bank of Italy highlights, for 2022, an increase in profitability for the Banks. The average value of the ROE (Return on equity), calculated net of extraordinary components, goes from 6% to 8.7%; the ROA (Return on Assets) goes from 0.42% to 0.67%. The reasons are attributed to an increase in MI as well as smaller value adjustments on loans. The banks therefore increased the yield on loans while, on the side of customer deposits, costs remained extremely low. Many bank deposits at sight were remunerated with zero or close to 0% rates of return. In our opinion this depends on the reluctance of many customers to request rate adjustments to new market conditions. We believe that a high level of loyalty among banking customers has contributed to this phenomenon, especially among families and small and medium-sized businesses.

An important role could be played by the progressive decrease in the number of bank branches. During 2022 their decrease was 3%. In the last decade we have a reduction of 36%. The comparison with other European countries, referring to 2021, highlights that the average number of inhabitants per branch has risen to over 2,700. This value in France is 1,900 and in Germany over 3,800. This dynamic is certainly justified by a greater level of digitalisation which has allowed a reduction in costs and better management efficiency. In other ways, the level of competition between intermediaries has decreased, in particular with regard to customers who need frequent contact with the branch, who tend to choose the bank closest to their residence, or to their business, giving a lower weight, in the decision-making process, on the costs of the account and the return offered.

The previous phase, characterized by a low level of returns, also with regard to government bonds and high-rated bonds, had led to the maintenance in liquid form of capital that normally exceeded the liquidity needs of families and businesses.

Table 3 - Financial instruments held in custody or administration with Italian intermediaries on behalf of retail customers and for the management of savings. End-of-period data in billions of euros (Source: Table 2.1 from Consob Annual Report for 2022)

	OICR	Derivati	Azioni Italiane	Azione estere	Titoli di Stato Esteri o di Agenzie Internaz.	Titoli di Stato Italiani	Obbligazioni di imprese finanziarie	Obbligazioni imprese non finanziarie	Altri Titoli	Totale
2013	547,6	58,6	329,4	55,8	114,9	941,5	763,1	87,2	41,7	**2939,9**
2014	676,7	73,4	346,5	66,2	138,5	927,8	672,5	103,1	32,8	**3037,4**
2015	755,7	88,8	424,3	76,3	136,2	866,3	580,6	107,2	31,7	**3067,1**
2016	810,5	83,1	330,2	91,1	150,8	810,1	480,2	119,4	33,4	**2908,8**
2017	878,9	62,0	358,5	90,6	163,6	750,4	378,3	122,9	32,4	**2837,5**
2018	837,6	29,4	292,5	98,0	176,3	737,2	331,0	126,2	21,5	**2649,6**
2019	958,4	26,0	298,1	111,4	198,3	812,6	313,7	136,1	52,6	**2907,2**
2020	996,8	37,1	276,1	140,5	219,0	851,8	299,9	141,1	20,6	**2982,9**
2021	1.315,6	39,7	367,7	194,3	216,5	800,3	273,8	134,9	22,5	**3365,4**
2022	1.141,8	76,5	345,4	185,3	197,9	716,2	273,2	120,1	13,1	**3069,5**

Table 4 – Comparison between 2022 and 2013 values

	OICR	Derivati	Azioni italiane	Azioni Estere	Titoli di Stato esteri o di Agenzie Internazionali	Titoli di Stato Italiani	Obbligazioni di imprese finanziarie	Obbligazioni di imprese non Finanziarie	Altri Titoli	Totale
2022	1,141.80	76.5	345.4	185.3	197.9	716.2	273.2	120.1	13.1	3,069.50
2013	547.6	58.6	329.4	55.8	114.9	941.5	763.1	87.2	41.7	2,939.90
VAR	594.2	17.9	16	129.5	83	-225.3	-489,90	-32.9	-28,60	129,60

From the analysis of the Table 3 and Figure 3, it is noted that the overall value of the financial instruments held in custody and administration at Italian banks by retail customers have undergone changes which, comparing the overall data for 2013 with that of 2022 (Table 4), are not very significant. If we examine the item "Italian government bonds", we notice a significant reduction in their consistency. The reason is probably to be found in the drastic reduction in returns and the propensity to keep funds for higher amounts in liquid form. In the opinion of the writer, when Italian ten-year bonds yielded around 1%, many investors abandoned, or reduced, this type of investment since the Downside-risk in the event of a rate rise was considerably greater than the Upside-risk in the event of a further, unlikely, reduction in rates. Examining the item "Bonds of financial companies", essentially bonds issued by banks or other

intermediaries, we notice a drastic reduction in them. We go from the amount of 763 billion euros in 2013 to 273 in 2022. The banks, in many cases, reduced these emissions because, considering that the gross return is subject to a substitute tax of 26%, against 12.50% as regards government bonds, to ensure savers a comparatively attractive return they would have had to increase the rates of return on these bonds to levels considerably higher than government bonds with the same Duration. The increase in investments in UCITS (collective savings investment schemes) is notable, including mutual funds and ETFs

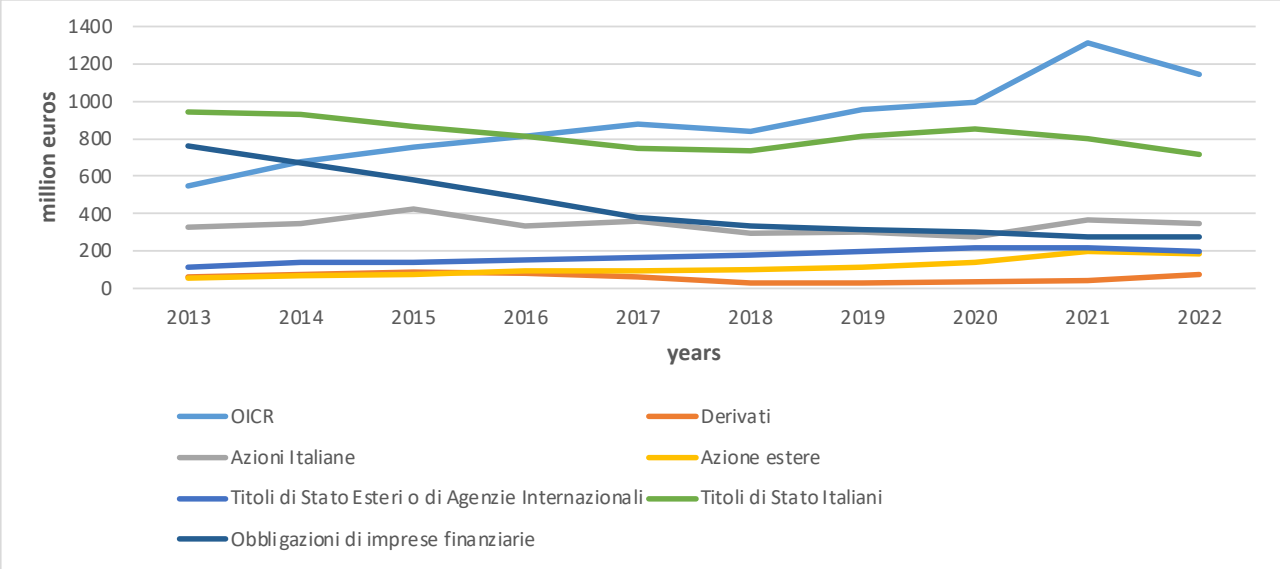

Fig. 3 – Retail customers investments from 2013 to 2022
(Source: Our Elaboration on dataset CONSOB)

6 – Final Conclusions

The restrictive monetary policy started by the European Central Bank (ECB) in July 2022, to counteract inflation in the euro area with rates that had exceeded 10%, had inevitable repercussions on the operations and interest margin of institutions Italian credit and market price of bonds listed on the Electronic Stock Market. The average returns of the lending operations quickly adapted to the new market rates, either because they were loans with variable rates or because, for those with a fixed rate, the new market conditions were applied at the time of renewal. As far as collection is concerned, as it mainly concerns sight deposits, the adjustment took place very partially and in any case with a longer timescale.

The reasons for this phenomenon, in My opinion, are to be found in a strong loyalty of banking customers and the decrease in the number of bank branches, which have reduced considerably in the last ten years. This reduction in the level of competition between banks was a further element that favored the phenomenon in question. Among other things, the 9 consecutive increases in the reference rates that occurred until August 2023 represented a sequence that has rarely occurred in monetary policy operations. The reasons set out above have led to a substantial increase in the interest margin, at an aggregate level, for Italian banks. Since, as is known, there is an inverse relationship between the market yields of bonds and the market price of previously issued ones, the situation that has emerged has resulted in significant losses

for the holders of these securities. Retail customers had already reduced their investments in government bonds and bank bonds for some years, considering the low returns offered.

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