Valuation of Non-equity Instruments of Current Eurozone Banking Sector

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Abstract. The paper presents the analysis of the increase in interest rates impact on the valuation of own funds and eligible liabilities in the scrutiny of interest rate risk in the banking book (IRRBB). Paper was prepared within the scope of EBA confidential analysis, leaving all market sensitive information, personal data or other confidential information. Aim of this paper is to present evaluation of current banking regulation and market challenges, with a prism to introduce *pro futuro* recommendations based on joint legal and economic analysis.

Keywords: Own Funds, Eligible Liabilities, Banking, CET1.

JEL classification: *E43 / E58 / G21*

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1 Background and objectives of this paper

Current macroeconomic conditions pose great challenges for banks. Interest rates (IR) increases, and foreign exchange (FX) movements may significantly impact the value of both assets and liabilities recognised in banks' balance sheets. While assets repricing and related sensitivities towards further interest rate shocks and FX changes are generally more explored, effects on liabilities deserve further analysis, also to gauge potential effects on the prudential value of own funds[2] and TLAC/MREL[3] instruments coming from adverse movements of these risk factors and interaction with accounting, prudential and hedging strategies put in place by banks. While the actual data are market sensitive, analysis built on them can be used for market and policy makers to evaluate current macroeconomic phenomena on banks within the eurozone.

Nonetheless, current banking crisis regarding situations on USA market [7][4] in connection with Swiss crisis of Credit Suisse forces policy makers and supervisors to evaluate IR increases on banking business. As per Basel III regulation, EU regulation of CRR, CRD, BRRD and other important legislation, we need to quickly evaluate changes in the macroeconomics and its impact on prudential regulation, to save in ultima ratio taxpayers of "too big to fail" moral hazard. Banks are at central of business activity, therefore when they experience financial distress, governments usually come to the rescue, offering emergency liquidity and various forms of bailout programs [10]. Mentioned facts are also important for SREP process used to evaluate risk of institutions on financial stability.

The impact of IR and FX movements on liability instruments can be quite material. For instance, significant institution based in UK announced as part of its Q3 2022 results a further emission of senior notes as a consequence of a significant reduction of the value of the Tier 2 and eligible liabilities instruments (USD 7 billion of which: almost USD 4 billion due to the increase of interest rates and USD 3 billion due to FX effects), which has generated questions on the current practices of EU banks. The impact can be therefore severe and can present significant risk on financial stability, which the regulation is designed to protect. Here we can observe the main conflict of law v. actuality or timely response to raising issues of market.

Within set background, author analysed a specific information on current banks' accounting and prudential practices on non-equity instruments, as well as on hedging strategies and associated IR and FX impact on the valuation of those instruments. Therefore the purpose of this paper is to provide an overview with market analysis to provide views that could need to be further investigated and monitored in this regard. All in the note of maintenance of financial stability.

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2 As defined by Article 25 and 72 and on of CRR.
3 As defined by BRRD
4 For details see: Hinh, T. Dinh.: The Current Banking Crisis and U.S. Monetary Policy, PP – 10/23, Policy Center of the New South 2023

2 Data on non-equity instruments

In November 2022, the EBA launched a stocktake on non-equity instruments' to collect the information deemed useful for the analysis of the issue at stake. As with cooperation with data collected by EBA, we used a representative sample covering institutions of different asset size of 56 institutions – located in 22 jurisdictions across the EU. Due to the market sensitive information, we can share only jurisdiction of the banks which data was used in the analysis: AT, BE, BG, CY, CZ, DE, DK, ES, FI, FR, GR, HR, HU, IE, IT, LU, LV, NL, PL, RO, SE, SI, SK. For the purpose of the analysis, large banks were defined as institutions with RWAs higher than EUR 100bn. Medium banks were defined as institutions with RWAs higher than EUR 30bn. Small banks were defined as institutions with RWAs lower than EUR 30bn.

The data collection encompassed the treatment of AT1, Tier 2 and MREL/TLAC instruments[8], and covered four main areas of investigation:

- **Accounting choices**, including the classification of AT1 instruments[5] as equity or debt, accounting classifications of debt instruments, use of hedge accounting, foreign currency denomination.
- **Prudential choices**, including alignment of accounting and prudential valuations. This also encompassed how banks might reflect FX movements on the value of AT1 instruments accounted for as equity, the prudential measurement basis used, and the exclusion from the carrying value of certain accounting items (e.g., accrued interest, hedge adjustments).
- **Hedging practices** on interest rate and FX risk, including the use of derivatives and hedge accounting (or election at FVtPL[6]), natural hedging, and other practices.
- **Impact** of the increase in interest rates and FX movements on AT1, Tier 2[7] / MREL/TLAC.

2.1 Accounting practices for financial liabilities

In accordance with IFRS 9, financial liabilities can be measured either at amortized cost (AC) or at fair value through profit or loss (FVtPL). Moreover, hedge accounting requirements are applied when there is a hedging relationship between a hedging instrument and a hedge item (e.g., a recognised asset or liability) in accordance with the rules provided in the standard.

Following a change in interest rates, when instruments are measured at AC without hedge accounting, their carrying amount will not reflect any impact. On the contrary,

5 The Tier 1 capital of an institution consists of the sum of the Common Equity Tier 1 capital and Additional Tier 1 capital of the institution.
6 Means fair value through profit or loss. Certain of the Corporation's investments in equity and debt securities have been designated as investments at FVTPL. Changes in the fair value of investments designated as investments at FVTPL are reported in net earnings or loss.
7 As set in Article 62 and on CRR

instruments measured at FVtPL or at AC with a fair value interest rate hedge will be affected by such a change in interest rate. In the latter case, the carrying amount of the instrument (i.e., hedged item) will be adjusted in the balance sheet (B/S) and the associated FV gains or losses will be recognised in P&L[8].

2.2 Current prudential treatment of own funds and TLAC/MREL instruments

In the Basel discussions from 2019[3], an agreement was reached on a high level 'internal' principle on measurement of non-equity capital/TLAC[9] instruments: *Non-equity regulatory capital and other TLAC-eligible instruments should be measured and reported, for purposes of calculating regulatory capital ratios, based on the amount of Common Equity Tier 1 that would be generated if the instrument is written down, taking into consideration any applicable Basel III amortisation requirements for the instrument (eg 5-year, straight-line amortisation for Tier 2 instruments). This principle should inform the reference amount to which such amortisation requirements shall be applied*.

A majority market is in favour of basing the amount recognised as capital purely on the accounting value. We propose to clarify the measurement approach in the Basel standards on disclosure, including with respect to the interaction with the prudential filter on FV changes related to own credit risk. We prefer to continue to discuss this issue in following paper.

The prudential treatment of Tier 2 instruments is however clarified with the amendments introduced by CRR2. Article 24 specifies that the valuation of assets and off-balance sheet items shall be affected in accordance with the applicable accounting framework, Article 64 further clarifies that the appropriate measurement basis should be the carrying amount for Tier 2 instruments.

2.3 Areas of investigation and preliminary analysis conducted

Analysis confirmed that both classifications as equity and debt have been used for **AT1 instruments**, with a general preference for the former (i.e., 76% of the sample classified AT1 instruments as equity). However, some mixed practices (e.g., classification of some instruments as debt and others as equity, or classification of the principal amount as debt and accrued interest as equity) have also been observed.

In terms of hedging of AT1 instruments, different practices from a risk management perspective have been observed. Some institutions have hedged (economically) the interest rate risk on those instruments viewed as interest rate sensitive, while other institutions have taken the opposite view in consideration of the discretionary nature of the coupon payments.

8 See IFRS 9 6.5.8

A few institutions that issued AT1 instruments in a foreign currency and accounted for the instrument as equity, have reported using a different conversion rate for accounting and prudential purposes. This implies that while the conversion rate at the date of issuance is used for accounting purposes[9] , the current conversion rate is used for prudential purposes (including an adjustment both on the AT1 and CET1 amount).

As regards to **Tier 2** and **MREL/TLAC instruments** it has been observed that the majority of banks are using mainly or only measurement at amortized cost. In addition, in many cases fair value accounting hedges on interest rate risk have been implemented on the instruments. This concerns 43% of the institutions of the sample for Tier 2 instruments and most large institutions. In a few cases other accounting treatments have also been reported such as FVtPL classification (achieving a similar outcome as FV accounting hedges in the presence of a hedging instrument) or the use of cash flow hedges.

In terms of **currency of issuance**, divergent practices have been observed. While most issuances of EU banks are in EUR and, therefore, insensitive to FX movements, larger and more international eurozone banks have also reported significant issuances in USD. Non-euro eastern European countries have also reported significant issuances in EUR. Finally, a more balanced funding profile has been observed in the Nordic countries.

The **prudential measurement** of Tier 2 and MREL/TLAC instruments has also been investigated and heterogenous practices have been observed in this regard. The carrying amount has been identified as the type of measurement more broadly used (i.e., prudential value is aligned with the accounting value, with the exception of specific prudential treatments such as Tier 2 amortization). However, other measurement basis have also been widely used, in particular the nominal amount or the outstanding amount. In addition, some banks have also made specific adjustments, such as excluding accrued interest or excluding the hedge adjustment arising from the FV accounting hedge. Majority of large banks have not taken into account hedge adjustments in the prudential value[10]. This could lead to increased systemic risk and inevitable moral hazard.

Some banks reported using **macro accounting hedges**, rather than micro hedges. In these cases, the hedge adjustments have been booked from an accounting perspective in a separate accounting line rather than directly in the value of the individual own fund instruments. As a result, using the ‘carrying amount’ has resulted in the exclusion of the hedge adjustments from the prudential amount.

9 See IAS 21

10 For a sample of 15 large banks, defined as RWAs higher than EUR 100bn, 73% reported excluding hedge adjustments from their Tier 2 prudential figure and 93% excluded hedge adjustments from their MREL/TLAC prudential figure.

In the first three quarters of 2022, institutions using FV accounting hedges or classification at FVtPL have reported a notable **decrease**[11] in the accounting value of their Tier 2 / MREL/TLAC instruments due to interest rate movements. From a financial perspective the P&L impact is close to zero (there is a gain on the own fund instrument and a loss on the derivative). However, from a prudential perspective, when the carrying amount is used without adjustments, the decrease in value of the instrument is fully reflected in the Tier 2 or MREL/TLAC amount. On the other hand, when the nominal amount, outstanding amount or carrying amount excluding the FV hedge adjustment is used, the impact from interest rate movements has not been reflected in the prudential value. A heterogeneity of impact is therefore observed due to divergent accounting and prudential practices.

3 Preliminary analysis

Analysis performed on the data submitted by banks overall reveals heterogeneous practices in the way banks account and measure non-equity instruments - both for accounting and prudential purposes -, as well as on the – economical and/or accounting - hedging strategies used to manage the risks those instruments are exposed to. This heterogeneity plays also an important role in the way banks have been – and will be - impacted by IR and FX movements.

Amid the various findings identified, the divergences among banks that have been detected are as follows:

- Prudential measurement basis: While the carrying amount is generally the most common basis used for prudential purposes for instruments classified as liabilities (especially Tier 2), different practices have been observed in particular on banks that have reported the use of the nominal value or other similar basis (e.g. the outstanding value). In some cases this approach was also followed for Tier 2. This could lead to differences between prudential supervision or resolution supervision, base on the practices used by the banks. Following differences can cause late identification of issues connected to the instruments used, therefore arises legal bias risks. As we presume, uniform reporting practices could be beneficial for risk mitigation.
- Hedge adjustments: In other cases, banks have reported to use the carrying amount as the prudential basis for instruments classified as liabilities, with an adjustment being made to filter out the effect of any FV hedge. Those adjustments have been observed to be performed at the level of the instruments (i.e., for determining their prudential value) and have, therefore, not affected the amount recognised in P&L (i.e., no impact at the level of CET1 capital).

11 For the 3 first quarters of 2022, the median reported decrease in the accounting value of Tier 2 instruments is 7.1% for Tier 2 and 7.6% for MREL / TLAC for the sub-sample of institutions using (partially) either FV accounting hedges or FVtPL classification. In terms of RWAs, the median impact is 0.21% for Tier 2, and 0.49% for MREL/TLAC.

Some banks have reported the willingness to avoid undue volatility in own funds (in the absence of prudential filters) and to ensure that the prudential amount does not depend on the hedge strategy (e.g., micro, macro, economic or no hedge) as the main rationales behind such adjustments. In this regard, it is worth highlighting that banks that indicated that this approach has been consistent over time regardless the sign of the adjustments (positive or negative effect on CET1).

- Treatment of accrued interest: Similarly, diversity in the consideration of accrued interest in the prudential figures have been also observed with a proportion of banks removing this component for prudential purposes, both for Tier 2 and TLAC/MREL instruments. Among the main reasons provided for such treatment was its plausible lack of compliance with the provisions governing the eligibility criteria regarding the minimum residual maturity of one year envisaged for TLAC/MREL instruments[12], or the minimum original maturity of five years envisaged for Tier 2 instruments[13], and/or the requirement for amounts to be fully paid up. Lack of compliance with regulative aspects is important marker for the instruments, as it can disqualify them to be used by the financial institutions in their business activities, which can lead in severe cases to infringement of capital requirements.
- Treatment of FX effect: Some heterogeneities have been also encountered in the way banks are reflecting the effect of FX in the AT1 instruments classified as equity and issued in foreign currency. While most of the banks do not use the updated conversion rate neither in the accounting nor in the prudential values, others have used the conversion rate at reporting date only for prudential purposes. For the latter case, banks have reported that the adjustment made on the value of the liability is also reflected in the CET1 figures (considering the gain/loss associated to a decrease/increase in the value of the liability). This treatment has been reported to be used with the main objective of aligning the value of the liability to the amount that would be paid in case of redemption which would allow to a prompt reflection of any embedded gain/losses on the prudential figures. This can be seen as best practices also set by EBA within the CET1 and eligible liabilities compliance exercises [2].

On the usage of carrying vs the nominal amount, the use of the carrying amount for own funds instruments is in line with the requirements set out in the CRR[14]. On the other hand, it was also stressed that the usage of nominal – at least for eligible liabilities – could result in less volatile figures, especially if the treatment is applied consistently over time. In this context, the need to ensure a level playing field among banks should

12 See Article 72a(1)(b) CRR

13 See Article 63(g) CRR

14 In accordance with Article 64(2)(a) CRR, for Tier 2 instruments, the amount reflected for prudential purposes is calculated using the carrying amount. In addition, Article 24 CRR provides that the valuation of assets and off-balance sheet items shall be effected in accordance with the applicable accounting framework

be highlighted. This is because whilst banks using the nominal amount will not suffer any variation in the prudential figures as a result of IR movements - regardless of the accounting and hedging strategies in place, banks making use of fair value measurement – also due to the usage of FV accounting hedges – are already reflecting these effects in their prudential figures. Using the nominal value could lead to a potential overestimation of the loss absorbency capacity of banks in certain situations. Loss absorbency capacity is closely connected to the moral hazard of too big to fail institutions present on the market, therefore this marker should be prioritized.

With regards to the exclusion of some factors from prudential figures (like accrued interests), the issue arises from loss absorbency capacity in case of liquidation. The starting point of the valuation of own funds and eligible liabilities instruments should be the carrying amount. Nevertheless, the question is whether all the eligibility criteria set out in the CRR should still be met (i.e., exclusion of those factors could be justified in cases where the provisions are not complied with[15]). In particular, it could also be considered that from the CRR provisions the eligibility criteria are applicable only to instruments (i.e., the principal) and not to the interest that is recognised only as a result of the measurement of the carrying amount. In this regard, accrued interests could never meet the 'fully paid up' criterion since they are paid by the issuer to the holder and not the reverse. In addition, it was stressed that the exclusion of any components included in the carrying amount could lead to asymmetries between accounting and prudential figures and could lead to a different definition of carrying amount for both purposes and for reporting under FINREP and COREP.

In the discussions provided on the roundtable with the banks, it was also noted that that some institutions have ultimately kept a treatment corresponding to the one used when prudential filters were still in place in order to remove volatility from own funds. Following approach is in correspondence with prudent supervision. In addition, it was stressed that the continuity of the use of a unique/consistent treatment by banks is an important aspect of own funds management (i.e. no use of opportunistic treatments by banks depending on the impact on CET1). Cautiousness should be exercised in requesting some changes in the treatments given the potential consequences in terms of additional issuances by some banks under certain circumstances, meaning volatility on the market, too much specification on certain types of bank products (NPL connected to specific market friction, e.g. aviation or start-up/fintech market, as been extremely volatile for SVB bank). In all cases we propose that there should be a need for a deepened understanding of the practices and discussions with the banks before making any policy decision (also considering practices in other non-EU jurisdictions). This approach is beneficial for policy makers, as it directly reflects market needs. However, consensus can be sometimes hardly reached, therefore we propose to continue of prudent perspective to be used in the negotiations.

15 Paragraph 65 TLAC/MREL EBA report, refers to the issue of interest being eligible, and highlights that all eligibility criteria, in particular the subordination requirement and minimum maturity of 1 year need to be met.

4 Conclusion

Analysis above highlighted some potential areas of further investigation in the way banks account for their own funds and eligible liabilities instruments and the impact observed from the current macroeconomic environment.

Capital is supposed to protect a bank from all sorts of uninsured and unsecured risks apt to turn into losses. Two principal functions of capital are recognised– to absorb losses and to build and maintain confidence in a bank. Capital is needed to allow a bank to cover any losses with its own funds. A bank can keep its liabilities fully covered by assets as long as its aggregate losses do not deplete its capital [4]. Any losses sustained reduce a bank's capital, set off against its equity items (share capital, capital funds, profit-generated funds, retained earnings), depending on how its general assembly decides [5]. Banks run a considerably greater risk of losses resulting from borrower defaults, rendering some of their assets partly or entirely irrecoverable. Capital has become a main issue of banking system. Within systematically important banks, share of capital in total assets/liabilities moves between 2.5 and 8 % [6]. Able to operate at the lower end of the range are large banks with a quality and well-diversified asset portfolio. Anyway, and this we presume to be deemed as factual, capital/ own funds adequacy deserves constant attention. Asset growth needs to respect the amount of capital.

In this regard, we conclude that additional regulative guidance on the application of the current framework may be needed on some aspects. In order to get a better (and wider) understanding of practices, we support a roundtable with banks and professional associations to be held to discuss more in depth mentioned aspects.

References

1. Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 Text with EEA relevance. Consolidated version
2. EBA FINAL draft regulatory technical standards On own funds under Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR)
3. Basel Committee on Banking Supervision: Consultative Document, Credit Valuation Adjustment risk: targeted final revisions [https://www.bis.org/bcbs/publ/d488.pdf]
4. Svitek, M.: Functions of Bank Capital, BIATEC year 9, 5/2001, [https://www.nbs.sk/_img/documents/biatec/svitekan.pdf]
5. Horvátová, E.: Banking, Bratislava: Balance Sheet, 2000
6. Hempel, G.H. – Simonson, D.G. – Coleman, A.B.: Bank Management, 4th edition, New York, John Wiley and Sons 1994
7. Hinh, T. Dinh.: The Current Banking Crisis and U.S. Monetary Policy, PP – 10/23, Policy Center of the New South 2023; available at: https://www.policycenter.ma/sites/default/files/2023-05/PP_10-23_Hinh_T_Dinh.pdf

8. EBA Report ON THE MONITORING OF TLAC-/MREL-ELIGIBLE LIABILITIES INSTRUMENTS OF EUROPEAN UNION INSTITUTIONS – UPDATE EBA/REP/2022/23 7 October 2022; available at: https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2022/1040363/TLAC-MREL%20instruments%202nd%20Monitoring%20Report.pdf
9. Basel Committee on Banking Supervision Standard TLAC holdings Amendments to the Basel III standard on the definition of capital; ISBN 978-92-9197-995-0 (online), available at: https://www.bis.org/bcbs/publ/d387.htm
10. DELL'ARICCIA, Giovanni, Enrica DETRAGIACHE a Raghuram RAJAN. The real effect of banking crises. Journal of Financial Intermediation [online]. 2008, 17(1), 89-112 [cit. 2023-07-03]. ISSN 10429573. Available at: doi:10.1016/j.jfi.2007.06.001