



Capitalization of Equity Investments in Funds Under the FRTB

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INTRODUCTION

In January 2019, the Basel Committee on Banking Supervision published the final elements of the Basel III capital framework, including revised standards for market risk capital known as the Fundamental Review of the Trading Book (FRTB). National regulators are now working to apply the rules in their jurisdictions, with implementation dates likely to reflect the challenges posed by the global pandemic¹.

When formulating the final FRTB standards, the Basel Committee considered many of the priority issues identified by the industry, and the revised framework is generally much improved from previous iterations, as well as the existing Basel 2.5 framework. However, certain aspects of the FRTB standards continue to pose challenges for the industry and result in unnecessary operational complexity and overly conservative capital requirements from an economic risk perspective.

One example of this is the treatment of equity investments in funds (EIIFs), which is complex, unclear and may result in banks reducing their activity in the sector. In response to these concerns, the International Swaps and Derivatives Association (ISDA), the Global Financial Markets Association (GFMA) and the Institute of International Finance (IIF) have developed this paper to examine the issues, implications and impact on the industry. The analysis refers to the Basel Committee's Basel III standards and, where appropriate, to Europe's Capital Requirements Regulation (CRR).

Part 1 of this paper provides an overview and analyzes the different methodologies that can be used for calculating capital for EIIFs under the FRTB. Part 2 describes the operational challenges faced by banks in implementing these methodologies, and Part 3 explores available vendor solutions and considers whether they could be used by banks to achieve regulatory requirements for applying the look-through approach (LTA). Finally, Part 4 introduces possible alternative methods for calculating capital for EIIFs. Ideally, these should be introduced consistently at the international level to achieve a level playing field for institutions and harmonious standards.

¹ The internationally agreed implementation date published by the Basel Committee on Banking Supervision is January 1, 2023. However, national regulators may adjust the timelines as they deem appropriate as a result of the coronavirus pandemic. For example, the European Commission has proposed a start date in the EU of January 1, 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_21_5401, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>

MAIN FINDINGS AND RECOMMENDATIONS

Funds have a key role in the economy, and banks play an important part in facilitating indirect investments in funds for their clients, offering hedging solutions for customers and providing an effective and liquid market. However, the FRTB treatment of EIIFs is excessively conservative and will impose an economic burden on banks, which could ultimately weaken this market. Specifically, the FRTB introduces an onerous mandatory methodology under the internal models approach (IMA), while most options under the standardized approach (SA) are not realistically viable.

The extent of the operational complexity and cost of the infrastructure changes required to apply the more advanced approaches are disproportionate and may result in banks using the less computationally intensive single-equity/other-sector approach, which serves as a fallback option for banks that can't or don't want to adopt the more complex methodologies under the SA.

To assess the approaches banks are likely to adopt for EIIFs, an industry survey was run in support of this paper. Based on the results of the survey, most banks will calculate capital based on the single-equity/other-sector approach, despite it being the most economically punitive method.

To address the operational and computation complexities, third-party vendors have developed solutions for the treatment of EIIFs under the FRTB, but these do not fully tackle all of the issues. This is partly because of the different regulatory requirements for funds, but also because of ambiguity in the regulatory framework over the extent to which third-party solutions can be used – in particular, whether sensitivities provided by third parties can be applied for the calculation.

The associations believe aspects of the FRTB framework should be reviewed and have developed the following recommendations:

- The LTA should not be imposed under the IMA. Instead, banks should be allowed to retain the flexibility to choose different modelling techniques under the FRTB, such as the use of daily liquid net asset value (NAV). They should also be able to capitalize the general risk of a fund's equity investments with a single risk-factor approach², with the adequacy of those choices validated through the profit and loss attribution (PLA) test and backtesting performance. Existing investor-protection frameworks for funds (eg, Undertakings for the Collective Investment in Transferable Securities (UCITS) in Europe and the Investment Company Act of 1940 in the US) should be recognized when deciding if such a modelling approach is appropriate.
- The treatment of EIIFs under the SA fallback approach can be extremely conservative. The unrated equity 'other sector' bucket approach³ is based on an absolute simple sum aggregation of individual fund issuers. In particular, a portfolio of highly correlated and diversified funds receives no diversification recognition, and the capital outcome rapidly becomes disproportionate compared to the level of economic risk.
 - Banks should be permitted to use FRTB capital per unit published by the funds where available. This approach is more risk aligned than using specific risk weights. The funds or other arms-length third parties could voluntarily publish the percentage capital per unit for the three components of the FRTB SA, which banks can use as risk weights for their positions in these funds.

² Targeted Review of Internal Models (TRIM) Market Risk §40, www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.guidetointernalmodels_consolidated_201910~97fd49fb08.en.pdf

³ Unrated equity 'other sector' bucket approach, Basel Committee on Banking Supervision, www.bis.org/basel_framework/chapter/MAR/21.htm?inforce=20230101&published=20200327

- Furthermore, the industry believes that the aggregation methodology for the fund-as-single-equity approach should be adapted. Risk-weighted exposures should be correlated rather than absolute simple summed as per the ‘other sector’ (bucket 11) specification.
- The SA mandate-based approach⁴ to capitalization is overly conservative and has significant implementation challenges. The calibration does not consider that funds typically contain thousands of individual holdings, diversified across at least one geography, asset class, sector or some other attribute. Representing a diversified fund as a concentrated portfolio based on the lowest-quality constituents allowed by the mandate will materially misrepresent the riskiness of the fund. To address this issue, there should be a simplified approach to generating the hypothetical portfolio based on historical characteristics rather than a capital-maximizing portfolio based on the mandate of the fund.
- Funds may contain a small percentage of alternative assets, such as real estate, which are not permitted in the trading book. Under the FRTB, funds that contain banking book positions would result in the entire fund moving to the banking book. The associations believe national competent authorities should have some discretion to allow firms to include some de minimis compulsory banking book instruments in the trading book if they are managed as part of an integrated trading strategy with similar instruments in the trading book.
- Inconsistencies resulting from different regulatory standards across jurisdictions could be addressed through reporting requirements using a common data model that all fund managers agree to use.

⁴ Mandate-based approach, Basel Committee on Banking Supervision: This approach allows banks to represent a fund as a hypothetical portfolio that must be constructed based on the most conservative composition within the fund’s mandate, www.bis.org/basel_framework/chapter/MAR/21.htm?inforce=20230101&published=20200327

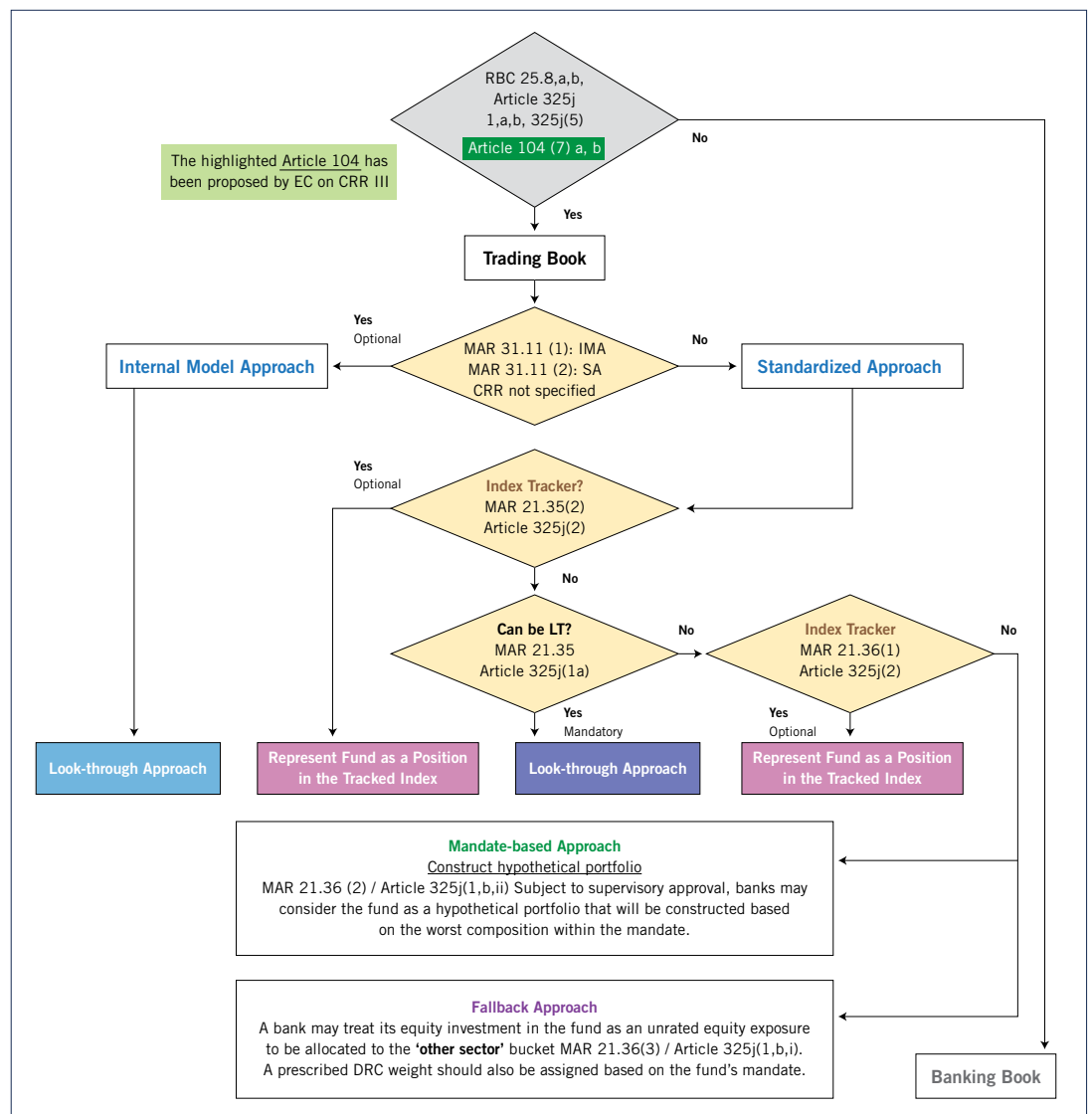
PART 1: OVERVIEW AND METHODOLOGIES TO CAPITALIZE EIIFs

Funds are very popular as they allow groups of investors to invest in a diversified portfolio of assets overseen by a professional manager at a lower cost than if they were to invest on their own. The importance of the role of funds in the economy is illustrated by the amount of capital raised from multiple investors, which is used to invest in a pool of different assets.

Under the FRTB, certain investments by banks⁵ in funds can be allocated to the trading book. The next section sets out the options for calculating capital for EIIFs and the implications that arise from the different methodologies.

Methodologies to Capitalize EIIFs

Figure 1. EIIFs Under the FRTB



⁵ A common activity for a bank's trading book is to meet client/investor demand for fund-linked derivatives. In order to hedge such derivatives, a bank will often purchase the underlying fund

EIIFs can only be allocated to the trading book if either of the following criteria are met:

- a) The bank is able to look through the fund to its individual components and sufficient and frequent information about the fund's composition is provided to the bank, verified by an independent third party.
- b) The bank obtains daily price quotes for the fund and has access to the information contained in the fund's mandate or in national regulations governing the investment funds⁶.

For funds that meet criterion (a), risks of the fund and any associated hedges should be considered as if the fund's positions were held directly by the bank (taking the bank's share of the equity of the fund and any leverage in the fund structure into account). The bank must assign these positions to the trading desk to which the fund is assigned. For funds that do not meet criterion (a) but meet criterion (b), banks must use the SA to calculate capital requirements for the fund⁷.

The IMA requires use of an LTA, while the SA offers four options: the LTA, an index-based approach, a mandate-based approach and a fallback approach. Each imposes different challenges from a computational perspective that will result in different capital requirements.

Internal Models Approach

Look-through Approach

The revised Basel III framework⁸ introduces significant changes compared to current Basel 2.5⁹ rules. Under the existing framework, funds have to be allocated to the banking book if banks cannot look through to the individual components on a daily basis or there is an absence of daily prices. Reluctance by asset managers to disclose information that could potentially reveal their strategy and delays that usually occur in the publication of information that is disclosed means it is difficult for banks to apply the LTA.

The revised rules address industry concerns about the daily look-through condition for trading book eligibility by amending the frequency requirement from daily to "sufficient and frequent information, verified by an independent third party". This change is essential, as it gives banks some flexibility to allocate funds to the trading book. Custodians also now meet the requirement to act as independent third-party information providers. Despite these changes, the LTA under the IMA is still too restrictive, and the imposed methodology and computational intensity make it very difficult for banks to apply.

As the revised market risk framework¹⁰ requires banks to have the capability to look through to the individual components on a sufficient and frequent basis, it is expected that funds can be included under the IMA as long as the bank is able to gather information on the underlying assets and leverage of the fund on a periodic basis (eg. at least weekly¹¹). However, it is extremely important that banks retain the flexibility to choose different modelling techniques as appropriate – for example, the time series of the fund, benchmark proxies or look through based on historical composition – with the adequacy of those choices validated via PLA and backtesting performance.

⁶ Criteria to calculate capital for the trading book: RBC 25.8(5)(a),(b), www.bis.org/bcbs/publ/d457.pdf. CRR II Article 325j (1)(a),(b), (5), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L._2021.084.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A084%3ATOC; CRR III proposal: Article 104 (7)(a),(b), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>

⁷ Criteria to capitalize under the internal models approach (IMA) or standardized approach (SA): MAR 31.11, www.bis.org/bcbs/publ/d457.pdf

⁸ Basel III framework: Minimum capital requirements for market risk, www.bis.org/bcbs/publ/d457.pdf

⁹ Basel 2.5, www.bis.org/bcbs/publ/d352.pdf

¹⁰ Revised market risk framework, Basel Committee on Banking Supervision, RBC25.8(5)(a), www.bis.org/basel_framework/chapter/RBC/25.htm?inforce=20230101&published=20200327#paragraph_RBC_25_20230101_25_8

¹¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>

Modelling flexibility is important for the following reasons:

- A mandated look through to the individual components of a fund would create a fundamental and unnecessary inconsistency between market risk capitalization and established market risk management practices. Fund exposures, including non-linear and volatility risks stemming from fund derivatives structures, are generally managed at the level of the fund rather than the underlying constituents. This is the case irrespective of the look-through capability (eg, even for simple liquid exchange-traded fund (ETF) positions). Moreover, financial institutions often use listed ETF options and other types of over-the-counter (OTC) options on mutual funds to hedge the market risk exposure of a fund. Management of market risk on a holistic basis in these cases is not only operationally more straightforward but ensures coherent capture of all risks within the fund that are reflected in the fund price.
- Looking through to the individual components of a fund may lead to an inferior model that does not necessarily provide the best view of the underlying risk profile, resulting in modelling inconsistencies and a less complete picture of risk factors. For example, if a bank is required to decompose the SPY ETF that tracks the S&P 500 index, and the bank already models the S&P 500 with its own time series, the risk and capital for the two positions would not be comparable. It would not be possible to find all the individual positions in the historical data back to 2007, as index composition changes over time.

In contrast, a time series dating back to 2007 for the index itself would be available and provide a better risk factor for modelling purposes. Furthermore, requiring a bank to look through to the individual components of an ETF may lead to the omission of key risk factors (such as the price/NAV basis, which is particularly material for bond ETFs), affecting PLA and backtesting. A decomposed approach will also likely result in a greater number of non-modellable risk factors, as not all index/ETF components are traded as frequently as the ETF, especially in the case of bond ETFs.

- The mandated approach is generally inconsistent with the IMA framework, which permits a variety of modelling choices (eg, banks are not required to decompose indices/baskets to model them under the IMA).
- The mandated look through to individual components would exclude many funds (including mutual funds and money market funds (MMFs)), as such detailed information is not available for them on a daily basis. As desks cannot hold a mix of IMA and SA positions, this will generally result in equities desks holding positions in funds that are entirely capitalized under the SA.
- The decomposed approach would add operational complexity and a computational burden on firms, as funds can include thousands of underlying assets. This would have a cascading effect for historical time series and risk-factor-eligibility-test data. This becomes even more problematic given the resulting model would be inferior to the non-decomposed approach.
- A mandated look through to the individual components of a fund contradicts other regulatory guidance issued by national supervisors. The European Central Bank's targeted review of internal models¹² explicitly identifies the use of daily liquid NAV as a valid modelling approach for value at risk (VaR) and stressed VaR (expected shortfall (ES) going forward). This assessment should be retained under the FRTB.

¹² European Central Bank (ECB) Guide to Internal Models, Section 2.6.3, para 40.b, www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.guidetointernalmodels_consolidated_201910-97fd49fb08.en.pdf: "The ECB considers that the positions in [collective investment undertakings (CIUs)] can be incorporated into the [value-at-risk] and [stressed-value-at-risk] models as a single risk factor to account for the general and specific risk of equity, the general risk of debt instruments, and the commodities risk of the positions in CIUs. As is the case for any other position, sufficient objective information on market risk should be available. The ECB considers that a suitable approach is to use the daily liquid price of the CIU"

Although model flexibility is justifiable, the revised framework implies the IMA can only be used for the daily calculation of ES if a full look through to the individual components of a fund occurs. It is recommended that the rules make clear this is not the case.

Standardized Approach

Under the SA, a distinction should be made between ETFs and mutual funds.

- ETFs are liquid and transparent vehicles that contain a basket of plain securities (typically cash equities or bonds), reflecting the composition of an index the ETF is meant to track. The information required to decompose these funds is easy to access. Looking through to the individual components may lead to some computational issues, but they will typically be manageable.
- Mutual funds are also liquid but are slightly less transparent and may contain more complex securities. Although they have limited risk due to regulations designed to protect individual investors (such as UCITS in Europe¹³ and the Investment Company Act of 1940¹⁴ in the US), mutual funds may be much more difficult to look through. As a result, banks are left with several impractical options.

The issues under the SA are mostly related to mutual funds. From a risk point of view, MMFs are considered to be a subset of mutual funds, although specialized in providing risk-free returns on excess cash. As such, MMFs face the same issues as mutual funds.

The proposed methods for calculating capital for funds under the SA lead to significant capital increases. This is not correlated with the risk posed by the exposure of the funds and threatens the liquidity of the fund derivatives market.

Table A summarizes the capital charge for a real-life portfolio under the current Basel 2.5 framework and the different SA methods set out in the revised rules¹⁵.

Table A: Capital Charges Under Basel 2.5 and the Revised Framework

	Basel 2.5	SA-LT	SA-Mandate	SA-Fall back
RWA	100	234	2700	4100

The associations also conducted a survey to assess the industry's preferred method(s) to capitalize EIIIFs under the FRTB, as well as quantify the impact for banks at the FRTB go-live date. The survey is based on quantitative and qualitative data provided by 22 banks with operations across the globe.

The survey finds the majority of the 22 participating banks plan to use the fallback approach under the SA, despite it being the most punitive method. That's because the other proposed methods cannot be applied to most mutual funds. The single-equity/other-sector approach will be used 61% of the time, with the LTA under the SA the second most widely used at 29% (see Figure 2¹⁶).

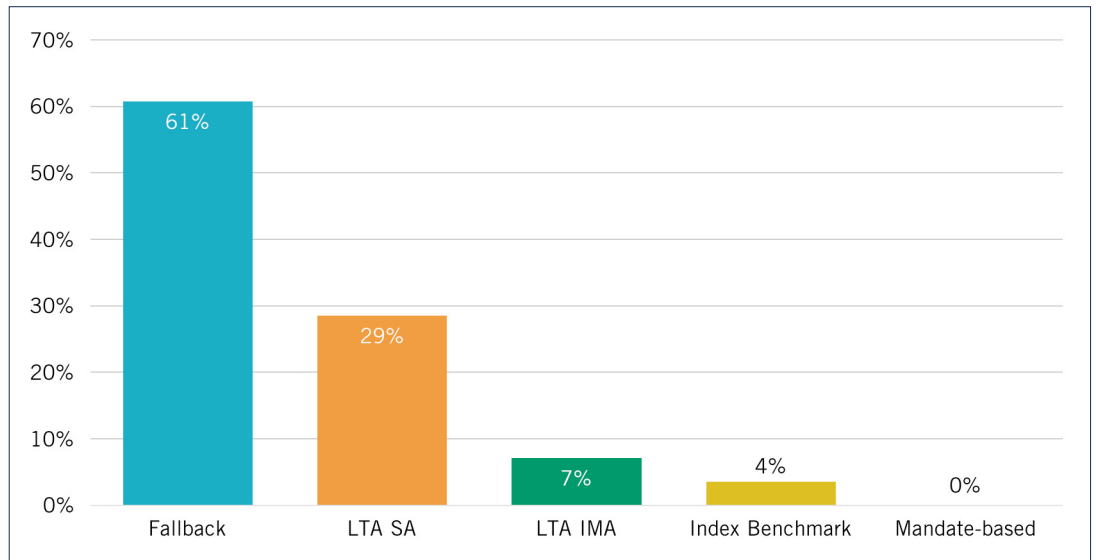
¹³ Funds in Europe can be subject to two regulatory directives: the Undertakings for Collective Investment in Transferable Securities (UCITS) and the Alternative Investment Fund Managers Directive (AIFMD). UCITS covers open-ended funds managed and domiciled in the EU that are aimed at retail clients, with the intention of ensuring appropriate levels of diversification and protection for investors. The most common types of UCITS are exchange-traded funds (ETFs), money market funds (MMFs) and mutual funds. All non-UCITS funds are covered by AIFMD, which imposes criteria for alternative investment funds including hedge funds, private equity funds and real estate funds

¹⁴ Investment Company Act of 1940, www.govinfo.gov/content/pkg/COMPS-1879/pdf/COMPS-1879.pdf

¹⁵ Joint response by ISDA and the Association for Financial Markets in Europe to the European Commission's consultation on implementation of the third Capital Requirements Regulation, page 125: www.isda.org/a/CkbTE/ISDA-AFME-Response-to-the-EC-Consultation-on-CRR3-Implementation.pdf

¹⁶ This graph is constructed based on the reported methodologies that are being used for more than 25% of a bank's fund portfolio

Figure 2: Most Frequently Implemented Method For Calculating Capital for Funds.



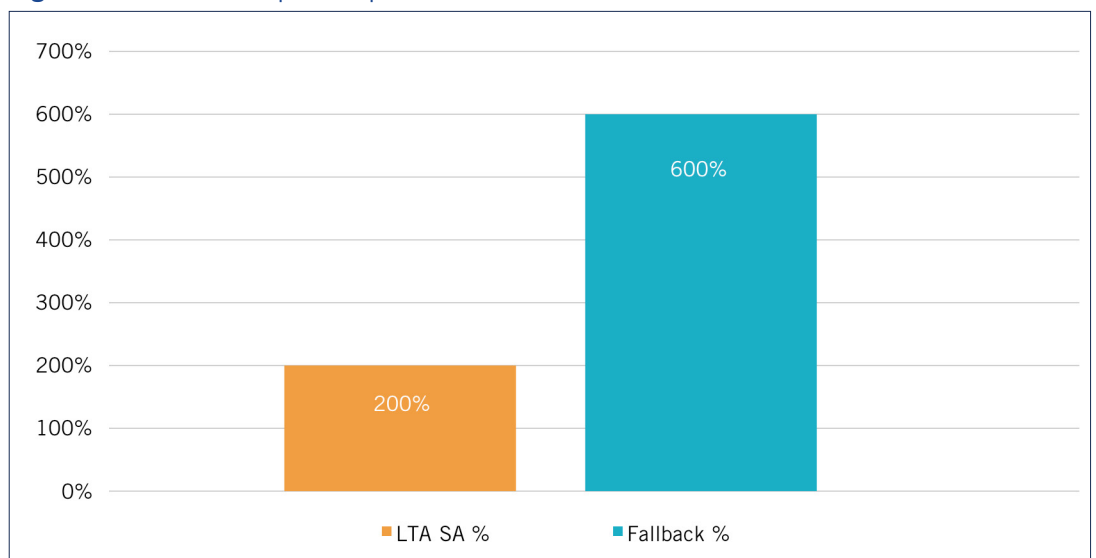
The survey also shows that capital is expected to increase by at least two times for 90% of banks using the fallback approach and by six times on average for 70% of those banks.

Very few of the respondent banks expect to implement the mandate-based approach. Those that do anticipate capital increases between two and 10 times.

Most banks also do not expect to be able to decompose a material portion of their fund portfolio (this corresponds to the proportion of banks that can't decompose at least 25% of their portfolio). Those banks using the LTA under the SA expect capital to increase by two times on average.

Figure 3 shows the estimated capital impact of the two most popular methods for calculating capital for EIIFs at the FRTB go-live date¹⁷.

Figure 3: Estimated Capital Impact at FRTB Go-live Date



¹⁷ This graph is constructed based on the reported methodologies that are being used for more than 25% of a bank's fund portfolio

Index-based Approach

Under the index-based approach, a bank must look through to the individual components of a fund if certain conditions are met¹⁸. However, banks may opt not to look through for funds tracking an index and instead represent the fund as a position in the tracked index if the following criteria are met¹⁹: a) the fund tracks an index benchmark and has an absolute value of a tracking difference of less than 1%; and b) the tracking difference is checked at least annually and is defined as the annualized return difference between the fund and its tracked benchmark over the past 12 months of available data.

The tracked-index-benchmark approach is reasonable for many ETFs, as these funds are intended to track a benchmark. Although ETFs typically publish on a frequent and public basis all the information necessary to perform a look through, banks want to retain the ability to decompose ETFs based on their benchmarks. However, the tracked-index-benchmark treatment is inappropriate for mutual funds, which usually try to beat their benchmark and not track it. As a result, mutual funds must resort to other capitalization options.

Multiple issues exist for mutual funds using the LTA. These include:

- The ability to retrieve every single position held by a fund on a regular basis is challenging. Given mutual funds (especially bond funds) may hold tens of thousands of individual securities, maintaining an updated database of hundreds of mutual funds is an operational challenge for banks. In fact, asset managers do not report their mutual fund holdings in a standardized format or with a standardized frequency.
- Obtaining transparent data on OTC holdings to conduct FRTB SA risk analysis is also a challenge, as information on contracts needs to be communicated by asset managers and correctly interpreted by banks. For instance, if a mutual fund holds an interest rate swap, a bank would need to retrieve information on the underlying interest rate, the day fraction convention and the payment frequency, among other things. Currently, there is no standardized format for reporting by asset managers to enable OTC contracts to be interpreted by banks for FRTB SA risk analysis. Looking through mutual funds with these holdings would therefore be extremely difficult, if not impossible.
- Given mutual funds may hold tens of thousands of individual securities, including funds investing in other funds, the ability to model every position would require significant implementation effort, computation time and ongoing maintenance that is disproportionate to the ultimate risk and capital of these positions.

Without some flexibility, the LTA would not be a practical solution for mutual funds business under the SA in most cases, especially as the SA is intended to be used by less sophisticated institutions.

¹⁸ Treatment of equity investments in funds, look through under the index-based approach, Basel Committee on Banking Supervision, MAR 21.35, www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327. CRR, Article 325j(1a), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.084.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A084%3ATOC

¹⁹ Opt not to look through for funds tracking an index, Basel Committee on Banking Supervision, MAR 21.35(2), www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327. CRR, Article 325j(2), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.084.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A084%3ATOC

Mandate-based Approach

When the index-based approach cannot be applied, the mandate-based approach is the next available option under the SA. This allows banks to represent a fund as a hypothetical portfolio that must be constructed based on the most conservative composition within the fund's mandate²⁰ and is subject to supervisory approval.

This approach relies on funds publishing certain information in their prospectuses, including financial objectives, investment policy, any limitations on the investment policy and an indication of any techniques, instruments or borrowing powers that may be used in the management of the fund. As publication of this information can differ between jurisdictions in which the funds operate²¹, there can be inconsistencies in what needs to be published.

Most funds describe their mandate broadly and do not set explicit limits that can be used to generate the hypothetical portfolio. As a result, most hypothetical portfolios would be based on limited concentrated equity positions, which would not be aligned with the true risk of these funds and would result in inappropriately high capital levels.

On top of the calculation for market risk capital requirements, firms also need to calculate counterparty credit risk and credit valuation adjustment capital, which adds additional layers of conservatism to capital levels. In addition, the need for supervisory approval introduces uncertainty, as banks currently do not know which criteria regulators will use to approve hypothetical portfolios. In its CRR III proposal, the European Commission (EC) has mandated the European Banking Authority to develop regulatory technical standards (RTS) to specify the technical elements of the methodology to determine hypothetical portfolios²².

Although the mandate-based approach may result in lower capital requirements compared to the fallback approach, it remains very conservative and operationally burdensome when compared to the risk posed by mutual funds.

Fallback Approach

The fallback approach²³ is only applicable when neither the index-based approach nor the mandate-based approach can be met.

Under this method, a bank may treat its EEIFs as unrated equity exposure that has to be allocated to the 'other sector' risk bucket. That imposes a specified punitive risk weight²⁴ and doesn't allow any diversification benefit²⁵.

²⁰ Mandate-based approach: Basel Committee on Banking Supervision, MAR 21.36 (2), www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327. CRR, Article 325j 1,b,ii, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.084.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A084%3ATOC

²¹ EU regulatory reporting requirements for funds: ISDA-AFME-Response-to-the-EC-Consultation-on-CRR3-Implementation

²² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>

²³ Fallback approach: Basel Committee on Banking Supervision, MAR 21.36 (3), www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327. CRR, Article 325j (1,b,i), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.084.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A084%3ATOC

²⁴ Other sector bucket, risk weight, Basel Committee on Banking Supervision, MAR21.77, www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327

²⁵ Other sector bucket, correlation, Basel Committee on Banking Supervision, MAR21.79, www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327

Because the other methods cannot be applied in most cases, this is the most common approach. However, it is overly conservative and applies the same risk weight to low-risk mutual funds as small cap, emerging market economy single stocks. The disproportionate capital requirements for funds under this method will force banks to trim down these positions, reducing the liquidity of this market.

As part of a December 2019 quantitative impact study, the Basel Committee removed three global systemically important banks that had used this method from its analysis. These banks were assumed to have zero FRTB impact on their trading book, which underestimates the effect.

Restrictions to the LTA for Overseas Funds

Some jurisdictions introduce legal restrictions on the use of the LTA²⁶ or mandate-based approaches²⁷ for overseas funds. In line with the Basel requirements, the EU's CRR introduces a default 1,250% risk weight for funds that cannot apply either the LTA or mandate-based approach. However, the CRR also applies this 1,250% risk weight to investments in overseas (third-country) funds that are not deemed equivalent. In effect, these investments in funds have to be reclassified in the banking book where they have a risk weight of 1,250%²⁸.

Equivalence is defined with reference to provisions in the third-country passport contained in the Alternative Investment Fund Managers Directive (AIFMD) – ie, if a third country has been granted access via the AIFMD third-country passport, then it is deemed equivalent. So far, no passporting under Directive 2011/61/EU article 67(6) has been granted. As a result, bank investments in these funds would have a risk weight of 1,250%, even in instances where the firm would otherwise be able to apply the LTA or mandate-based approach.

This restriction has not been included in the UK framework, and HM Treasury noted that “it would be disproportionate to introduce the AIFMD third-country passport for these purposes on the grounds that the third-country passport is designed for funds accessing investors (including retail investors) in another market, rather than banks investing in overseas funds”²⁹.

If these legal restrictions on the use of the LTA or mandate-based approach remain in the EU framework, then they would significantly impact the ability of EU banks to invest in third-country funds.

²⁶ LTA: The bank is able to look through the fund to its individual components and there is sufficient and frequent information, verified by an independent third party, provided to the bank about the fund's composition

²⁷ Mandate-based approach: This approach allows banks to represent a fund as a hypothetical portfolio that must be constructed based on the most conservative composition within the fund's mandate

²⁸ A banking book classification may contradict other trading book/banking book boundary requirements, such as trading intent (RBC25.5), which indicates a trading book classification. It is also unclear how some derivatives exposures would be capitalized in the banking book

²⁹ HM Treasury consultation, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/958183/Prudential_Consultation.pdf

PART 2: THE NEED FOR CHANGE: INFRASTRUCTURE CHALLENGES AND IMPACT TO THE INDUSTRY

The amount of data required by banks to apply the various approaches is overwhelming and is currently not available as the existing framework does not require this information to be collected. The infrastructure changes required for banks to comply are therefore immense.

The availability of information required for the LTA is dependent on the publication of the composition of funds by the respective asset managers. It is not uncommon for publication of these reports to be delayed by a few weeks, which can be disruptive for banks. The relationship between banks and asset managers will therefore become significant as a constant flow of information would be a competitive advantage.

An important factor will be how asset managers distribute this information and whether it will be presented in a unified format. An additional consideration is that funds in the EU are regulated under the AIFMD or UCITS, which impose different disclosure requirements.

On top of this, the development of algorithms to manage the increased computational requirements of the LTA will be expensive for banks to implement. This is particularly the case in Europe, where monthly and weekly look-through frequencies have been proposed under the SA and IMA, respectively³⁰. This may result in banks avoiding this approach unless further flexibility and clarification are provided by regulators.

Key issues include:

- The frequency of information on the composition of funds by asset managers;
- The use of vendors to look through the funds (ie, to determine the components and conduct the FRTB SA risk analysis); and
- The fallback treatment of constituents (such as OTC components) in cases when it is impossible to conduct FRTB risk analysis due to operational issues.

The tracked-index-benchmark treatment and the allocation of a sensitivity to an index bucket can only be applied in specific cases, such as ETF trackers.

The mandate-based approach is less computationally demanding than the LTA. However, the required hypothetical portfolio would not accurately represent the risk of a fund, as it may not take the diversification effect fully into account, which will result in higher than justified capital requirements.

The fallback approach is the least burdensome operationally but is the most punitive from a capital perspective. With significant increases expected, it could threaten the viability of this business for banks.

³⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>

PART 3: THIRD-PARTY SOLUTIONS AND LIMITATIONS

The ambiguity and complexity of the new rules has prompted the industry to approach third-party vendors for solutions. The final Basel framework allows third parties to be used to obtain information but does not set any parameters on how this information can be used.

Even if third-party vendors are willing to provide solutions, it seems unlikely they will be able to facilitate a full look through on some of the most complex mutual funds. Regulators should therefore not rely on third-party solutions as an alternative to fixing the flaws in the regulatory frameworks.

In addition, SA sensitivities are required to be calculated using pricing models adopted to report market risk or profits and losses to senior management³¹. It is not clear whether sensitivities provided by third parties would meet this requirement, although it might be possible to obtain risk analysis from vendors that is then audited by a third party, such as an audit firm, which could reduce the operational burden of implementing the rules.

In the EU, the EC's CRR III legislative proposal has indicated the potential use of sensitivities by banks when provided by a third party if certain criteria are met. However, it is still unclear what data will be permitted to be used by banks and whether there will be potential limitations on the provider.

In particular, clarification is needed on the use of data vendors to standardize data provided to banks by asset managers, the adequacy of data inputs and the information to calculate the own funds requirement for market risk (compositions, NAV sensitivities, etc). The introduction of an industry standard for compositions and FRTB risk analyses would be helpful to reduce the operational burden to look through EIIFs, as banks are working with various asset managers that provide a wide variety of data formats and templates.

Clarification is therefore needed on whether banks can use sensitivities provided by a third party if these sensitivities are based on audited data/processes. This approach is already available for the treatment of EIIFs in the banking book.

³¹ Requirements on sensitivity computations, Basel Committee on Banking Supervision, MAR21.16, www.bis.org/basel_framework/chapter/MAR/21.htm?tdate=20230101&inforce=20230101&published=20200327. CRR 325t(1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.150.01.0001.01.ENG&toc=OJ:L:2019:150:TOC

PART 4: ALTERNATIVE METHODS TO CAPITALIZE EIIFs

Various other methods could be proposed under the SA and IMA, which are set out in this section.

Treat Funds as a Single Underlying

The current risk weight proposed in the sensitivities-based method (SBM) is 70% (ie, bucket 11 with the risk-weighted sensitivities aggregated via absolute simple sum), which is overly conservative and disproportionate to the risk posed by funds. The industry believes further calibration of the risk weights is necessary and the aggregation methodology should be adapted

Calibration of Risk Weights

It is proposed to have specific risk weights for funds that take the diversification of funds into account, and to ensure the rules are simple, transparent and easy to implement while not underestimating the risk. If fund mandates specify a VaR limit to which the manager has to adhere, banks should be permitted to consider these limits when mapping these funds to their appropriate risk weights. These provisions should also be recognized when creating the hypothetical portfolio under the mandate-based approach.

Another option would be to permit banks to use FRTB capital per unit published by the funds where available. Given the breadth of the fund strategies and dynamic portfolio composition, this approach is more risk aligned than using specific risk weights. The funds or other arms-length third parties could voluntarily publish the percentage capital per unit for the three components of the FRTB SA, which the banks can use as risk weights for their positions in these funds.

The funds and the third parties would be subject to the applicable standards of audit and supervisory oversight. As SA calculations are designed to be simple, consistent and replicable, it is expected that the capital produced by the fund and/or its agents would be comparable to the standalone capital that banks would have produced using an LTA.

This approach has a few advantages:

- **Conservative:** It continues to be conservative as it does not offer netting of risk across fund exposures or between fund exposures and other positions of a bank.
- **Risk aligned:** It would ensure proportionality between the risk profile of the funds and the associated capital requirement for positions held by the banks.
- **Ease of implementation:** This approach would require fewer data points and position-specific disclosures, so is likely to be more acceptable to the funds industry, allowing banks to implement the requirements with relative ease.
- **Consistent:** If banks use the capital per unit published by the funds, there would be consistency in capital requirements across the banking industry.

Permitting Use of Correlation Structure

The correlation structure for funds should allow for some diversification benefit in the SBM computation, rather than calculating the sum of absolute values as required for the ‘other sector’ bucket.

One option would be to apply the current rules on correlation and risk-weight calculation for indices, which have similarities with mutual funds (ie, a diversified pool of volatile underlyings). The index buckets (ie, MAR 21.72 buckets 12 and 13) could be directly used for funds. This approach would be consistent with current risk management practices, which typically consider mutual funds as an index-like underlying with a reduced shock/volatility.

Table B illustrates the magnitude of the SBM equity capital outcome under the fallback approach when applied to a portfolio.

If a portfolio consisting of six EIIF positions (labelled A-F) is considered, then the capital outcome under the fallback approach will be \$805 million.

Table B: Capital Charges Under the SA Fallback Approach

Fund Issuer	Fund Delta (USD Mn)	Risk Weighted Delta (70%)	Abs Risk Weighted Delta	Capital
A	400	280	280	805
B	-200	-140	140	
C	160	112	112	
D	-150	-105	105	
E	140	98	98	
F	-100	-70	70	

If the same portfolio is considered using a correlated SBM aggregation, where Rho = intra bucket correlation parameter³², then the capital outcome decreases significantly (see Table C).

Table C: Capital Charges Under the SA Correlated SBM Aggregation

Rho	RW	Comment	Capital	vs MAR 21.36(3)
N/A	70%	MAR 21.36(3) Simple Absolute Sum	805	
50%	70%	Typical single equity Rho, High RW	288	-64%
	50%	Typical single equity Rho, Med RW	206	-74%
	25%	Typical single equity Rho, Index RW	103	-87%
80%	70%	Rho Per Index Bucket 13, High RW	227	-72%
	50%	Rho Per Index Bucket 13, Med RW	162	-80%
	25%	Rho & RW Per Index Bucket 13	81	-90%

³² Basel Committee on Banking Supervision, calculation of the delta and vega risk capital requirement, www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327

- Absolute simple sum aggregation provides no benefit for diversification. If a bank holds a substantial portfolio of mutual fund exposures, then each fund under the fallback approach is capitalized independently, irrespective of the direction of the risk.
- Correlated aggregation provides benefit up to the level of the correlation. For a well-diversified portfolio of mutual funds, the capital impact of the aggregation method can vastly outweigh the impact of the risk-weight levels.

The industry proposal is to replace the simple absolute sum aggregation with correlated aggregation. This would be a straightforward amendment, without the need for any structural changes to the SBM specification. For example, fund exposure could be rerouted to bucket 13³³, potentially with an amended risk weight versus the 25% for traded market indices.

Simplified Hypothetical Portfolio

If the fund could be treated as a representative portfolio based on its recent historical holdings instead of its mandate, the portfolio would be more aligned to the actual risk of the fund and would not be overly conservative. The hypothetical portfolio could be updated periodically.

This would be more practical than using an exact historical look through, which would potentially require valuation models to be approved and ready to use for tens of thousands of individual securities. This would be operationally burdensome, impractical and disproportionate to the risk posed by the funds. Calculating capital based on a representative hypothetical portfolio would achieve a balance between accuracy and appropriateness. As elsewhere in the market risk rules³⁴, the approach used to generate the hypothetical portfolio would be subject to supervisory approval.

Historical and Partial Look Through

Under the historical look-through approach, the frequency with which the constituents of the fund are updated may differ from the frequency at which the look-through information is made available. This would simplify the implementation of the look-through approach by enabling the components of the fund to be updated based on the most recent disclosures, with this information updated monthly or quarterly for the purpose of calculating capital. This approach would be more precise than using a representative portfolio and should be available for banks able to model all the securities owned by the funds.

FRTB SA Partial Look-through Approach

A 100% look through (ie, FRTB-SA risk analysis based on a full breakdown of the composition of the fund and description of derivatives) is often not possible due to a lack of information on the make-up of the fund and the complexity of calculating FRTB-SA risk analysis for some components, such as OTC derivatives. A partial look-through approach could be an alternative solution. This would enable firms to use the look-through information that is available and to apply a conservative fallback approach for the remaining components (for example, applying the SBM's maximum risk weight of 70% for each component that could not be looked through). This would be more refined than the single-equity approach, while allowing flexibility and avoiding significant operational issues.

³³ Basel Committee on Banking Supervision, risk weights for the sensitivities to each of equity spot price and equity repo rates, www.bis.org/basel_framework/chapter/MAR/21.htm?tidate=20230101&inforce=20230101&published=20200327

³⁴ Hypothetical portfolio, subject to supervisory approval, Basel Committee on Banking Supervision, MAR 21.36(2), www.bis.org/basel_framework/chapter/MAR/21.htm?tidate=20230101&inforce=20230101&published=20200327

Internal Models Approach

Under the IMA, banks could be allowed to develop appropriate models to the extent they meet regulatory model performance requirements (ie, PLA tests and backtesting).

Banks should be able to model fund exposures irrespective of the availability of the LTA.

For the internally modelled capital charge, any approach would be allowed to the satisfaction of supervisory authorities and on condition that PLA testing and backtesting requirements are met. In particular, the single risk factor approach should be acceptable under the IMA.

For the IMA default risk charge (DRC), several options exist:

- If frequent (eg, weekly) look through is available, the IMA-DRC could be calculated based on the components of the fund.
- If the fund tracks an index closely enough³⁵, the IMA-DRC could be calculated based on the components of the tracked index.
- The use of a representative hypothetical portfolio or historical look through should be made available in the IMA-DRC.
- In all other circumstances, the default risk charges should be calculated under the SA with any of the methods available to banks (including the three methods proposed in this document).

³⁵ Look-through for funds that hold an index instrument, Basel Committee on Banking Supervision, MAR21.35(1), www.bis.org/basel_framework/chapter/MAR/21.htm?ldate=20230101&inforce=20230101&published=20200327

CONTACTS

Panayiotis Dionysopoulos

Head of Capital
International Swaps and Derivatives Association,
Inc. (ISDA)
25 Copthall Avenue, 3rd floor, London EC2R 7BP
Tel: +44 (0)20 3808 9700
pdionysopoulos@isda.org

Gregg Jones

Director, Risk and Capital
International Swaps and Derivatives Association,
Inc. (ISDA)
25 Copthall Avenue, 3rd floor, London EC2R 7BP
Tel: +44 (0)20 3808 9700
gjones@isda.org

Jouni Aaltonen

Managing Director, Prudential Regulation
Association for Financial Markets in Europe (AFME)
25 Canada Square, London E14 5LQ
Tel: +44 (0)20 3828 2671
jouni.aaltonen@afme.eu

Allison Parent

Executive Director
Global Financial Markets Association (GFMA)
1099 New York Avenue, NW, 6th Floor
Washington, D.C. 20005, United States
aparent@global.gfma.org

Richard Gray

Director, Regulatory Affairs
The Institute of International Finance (IIF)
1333 H St, Washington, DC.
Tel +1 202 857 3600
rgray@iif.com

Takahiro Iwamoto,

Policy Advisor, Regulatory Affairs
The Institute of International Finance (IIF)
1333 H St, Washington, DC.
Tel +1 202 857 3600
tiwamoto@iif.com

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