

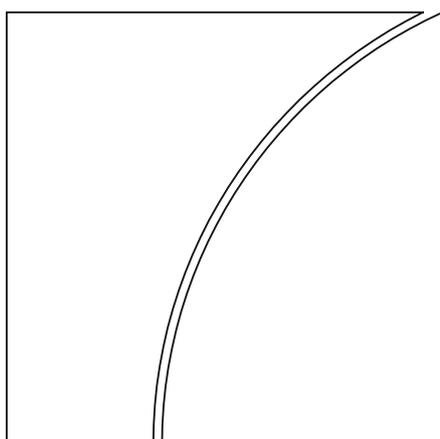
# Basel Committee on Banking Supervision

## Consultative Document

### Capital requirements for banks' equity investments in funds

Issued for comment by 4 October 2013

July 2013



**BANK FOR INTERNATIONAL SETTLEMENTS**

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# Revision of the capital requirements for equity investments in funds

## I. Introduction

1. In October 2011, the Financial Stability Board (FSB) announced the creation of five workstreams to strengthen the oversight and regulation of shadow banking.<sup>1</sup> This included a workstream on banks' interactions with shadow banking entities. To take this work forward, the Basel Committee on Banking Supervision agreed to review the risk-based capital requirements for banks' exposures to funds. The original scope of the Committee's review covered the regulatory capital treatment of banks' exposures to funds acting as shadow banking entities. The Committee decided to expand its review to cover the capital requirements that apply to banks' investments in the equity of *all* types of funds. This is intended to ensure an appropriately risk sensitive and consistently applied regulatory capital standard.

2. The Basel II framework<sup>2</sup> outlines the current treatment of banks' equity investments in funds under the Standardised Approach and the Internal Ratings-Based (IRB) approaches for credit risk. More specifically:

- At present, there is no explicit treatment under the Standardised Approach for banks' equity investments in funds. Instead, these exposures would be classified as claims on "other assets", which receive a 100% risk weight (see paragraph 81 of Basel II). National supervisors may decide to apply a risk weight of 150% or higher reflecting the risks associated with some other assets (eg venture capital or private equity exposures – see paragraph 80 of the Basel II framework).
- Under the IRB approach, banks may risk weight their investments using either the treatment applicable to the majority of a fund's underlying holdings or the "look-through approach", where the fund's underlying components are considered as separate and distinct investments (see paragraph 360 of the Basel II framework). Alternatively, banks may consider the investment mandate of the fund and apply the relevant risk weight assuming that the fund has invested, to the maximum extent allowed, in the asset class attracting the highest capital requirement, and then, for the other asset classes, in descending order of risk weight applied (see paragraph 361 of the Basel II framework).

3. In a number of areas, it has been suggested the Basel II framework text would benefit from more clarity on how banks should implement the above provisions, eg greater clarity on how the "majority of holdings" is defined, on how to apply the IRB approach to the mandate of a fund, and on how to interpret the expression "where possible". Moreover, the framework does not explicitly require

<sup>1</sup> The FSB defines the shadow banking system broadly as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system" or non-bank credit intermediation in short. The FSB has launched five workstreams to assess in details the case for further regulatory action. As part of this effort, the Committee will examine enhanced consolidation for prudential regulatory purposes, concentration limits/large exposure rules, risk weights for banks' exposures to shadow banking entities, and the treatment of implicit support. (See the FSB consultative document *Strengthening Oversight and Regulation of Shadow Banking: An Integrated Overview of Policy Recommendations*, 18 November 2012, available at [www.financialstabilityboard.org](http://www.financialstabilityboard.org)).

<sup>2</sup> *International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version* (June 2006), which is accessible at [www.bis.org/publ/bcbs128.htm](http://www.bis.org/publ/bcbs128.htm).

banks to reflect the relevant fund's leverage when determining capital requirements associated with the bank's investments, even though leverage is an important risk driver. The Basel II framework also does not provide a rank ordering between the look-through approach and the mandate-based approach, as reflected in paragraphs 360 and 361 of the framework.<sup>3</sup>

4. In view of these ambiguities and shortcomings, the Committee has decided to review the prudential treatment of banks' equity investments in funds by developing a revised capital regime. In developing a revised standard, the Committee believes a revised standard should appropriately reflect both the risk of a fund's underlying investments and its leverage.

5. The Basel Committee welcomes comments on this consultative document. Comments on the proposals should be submitted by **Friday 4 October 2013** by e-mail to: [baselcommittee@bis.org](mailto:baselcommittee@bis.org). Alternatively, comments may be sent by post to: Secretariat of the Basel Committee on Banking Supervision, Bank for International Settlements, CH-4002 Basel, Switzerland. All comments may be published on the website of the Bank for International Settlements unless a comment contributor explicitly requests confidential treatment.

## II. Prudential framework for equity investments in funds

6. This section sets out the Committee's proposal for a prudential framework for calculating capital requirements for banks' equity investments in funds.

### A. Scope of application

7. The proposed framework is applicable to banks' equity investments in all types of funds, including off-balance sheet exposures (eg unfunded commitments to subscribe to a fund's future capital calls). It applies to banks' equity investments in funds that are held in the banking book. The Committee is mindful of the need to avoid a disparate treatment between the banking book and trading book and will ensure, as part of its fundamental review of the trading book, that a consistent approach is applied to any eligible equity positions to funds in the trading book.

8. Under national discretion and consistent with the current Basel II framework, equity investments in funds as referred to in paragraphs 356 and 357 of the Basel II framework may be exempted from the proposed framework. These exemptions related to investments in funds whose debt obligations qualify for a zero risk weight under the Standardised Approach for credit risk or to funds in legislated programmes that provide significant subsidies for banks' investments and involve some form of government oversight and restrictions on the equity investments.

<sup>3</sup> Such lack of clarity has led to different implementation practices both across jurisdictions and banks. For example, in the European Union, the full IRB look-through approach is mandatory for IRB banks and, where banks are not able to apply it, a 370% maximum risk weight plus 2.4% deduction for expected losses is used. In the United States, a 600% risk weight is applied to equity investments in hedge funds. Banks using the Standardised Approach are not explicitly required to use the look-through approach in most jurisdictions; for example, in the EU, the look-through approach is optional under the Standardised Approach.

## B. Scope of consolidation and deductions from capital

9. The Basel III framework<sup>4</sup> requires banks to deduct certain direct and indirect investments in financial institutions (see paragraphs 78 to 89). Exposures, including underlying exposures held by funds, that are required to be deducted under the Basel III framework should not be risk weighted and therefore should be excluded from the framework proposed in this consultative document.

## C. Policy framework

10. As a general principle, banks should apply a look-through approach to identify the underlying assets whenever investing in schemes with underlying exposures such as investment funds. The Committee recognises that a full look-through approach may not always be feasible and that a staged approach based on different degrees of granularity of the look-through is warranted. The proposed risk weighting framework therefore enables the application of a consistent risk-sensitive capital framework which provides incentives for improved risk management practices.

11. Following this principle, the proposed policy framework consists of three approaches, with varying degrees of risk sensitivity: the “look-through approach” (LTA), the “mandate-based approach” (MBA), and the “fall-back approach” (FBA). To ensure that banks have appropriate incentives to enhance the risk management of their exposures, the degree of conservatism increases with each successive approach (as risk sensitivity decreases). An example of this is illustrated by the decision tree in Annex 1.

### The look-through approach

12. The “look-through approach” (LTA) requires banks to risk weight the underlying exposures of a fund as if the exposures were directly held. This is the most granular and risk sensitive form of look-through. It must be used when:

- (i) there is sufficient and frequent information provided to banks regarding the underlying exposures of the fund; and
- (ii) such information is verified by an independent third party.

13. To satisfy condition (i) above, the frequency of financial reporting of the fund must be the same as, or more frequent than, that of banks and the granularity of the financial information must be sufficient to calculate the corresponding risk weights. To satisfy condition (ii) above, there must be verification of the underlying exposures by an independent third party, such as the depository or the custodian bank or, where applicable, the management company. Thus, condition (ii) does not require an external audit. Indeed, externally licensed auditors typically express their opinions on funds’ accounts rather than on the accuracy of the data used for the purposes of applying a LTA. In addition, audits of funds by externally licensed auditors are usually performed on an annual basis, which would not meet the minimum required frequency for prudential purposes.

14. In order to address concerns regarding the opacity of some shadow banking entities, which may arise when there are successive layers of funds (eg the fund in which the bank has an investment has equity investments in another fund – a so-called fund of funds), banks applying the LTA must be

<sup>4</sup> See *Basel III: A global regulatory framework for more resilient banks and banking systems* (June 2011), which is accessible at [www.bis.org/publ/bcbs189.htm](http://www.bis.org/publ/bcbs189.htm).

able to further look through to every subsequent layer of the fund. Banks will be required to apply a risk weight of 1250% to a fund's exposures to other funds.

15. Under the LTA:

- Banks using the Standardised Approach for credit risk must risk weight all underlying exposures of the fund as if those exposures were directly held including any underlying exposure arising from the fund's derivatives exposures (whenever the underlying receives a risk weighting treatment under Pillar 1) and the associated counterparty credit risk.
- Banks using an IRB approach must calculate the equity investment's IRB risk components (ie Probability of Default - PD - of the underlying exposures and, where applicable, the relevant Loss Given Default - LGD - and/or Exposure at Default - EAD) associated with the fund's underlying exposures. This includes any underlying exposures arising from the fund's derivatives exposures (whenever the underlying receives a risk-weighting treatment under Pillar 1) and the associated counterparty credit risk, as if they were exposed to such risk directly. Banks using an IRB approach may use the Standardised Approach on the underlying components of the funds whenever they are allowed to do so under the partial use provisions set out in paragraphs 256 to 262 of the Basel II framework in the case of directly held investments.

When an IRB calculation is not feasible (eg the bank is neither the originator nor the sponsor of a fund and therefore cannot assign the necessary risk components to the underlying exposures in a manner consistent with its own underwriting criteria), a bank using an IRB approach may use the Standardised Approach risk weights. However, for equity exposures banks should apply the simple risk weight method for equity exposures in the banking book, and for securitisation positions, banks should apply the ratings-based approach.

16. Banks may rely on third-party calculations for determining the risk weights associated with their equity investments in funds (ie the underlying risk weights of the exposures of the fund) if they do not have adequate data or information to perform the calculations. In such cases, the applicable risk weight would be one risk weight notch higher than the one that would be applicable if the exposure was held directly by the bank.<sup>5</sup> Whenever the risk weights of underlying exposures cannot be determined, a 1250% risk weight is applied.

### The mandate-based approach

17. The second approach, the "mandate-based approach" (MBA), provides a method for calculating regulatory capital that can be used when the conditions for applying the LTA are not met. The MBA is consistent with the Basel II framework (paragraph 361), which explicitly allows banks to use the investment mandate of the fund for calculating risk weights.

18. Under the MBA approach, banks may use the information contained in the fund's mandate<sup>6</sup> or in the national regulations governing investment funds. To ensure that all underlying risks are taken into account (eg including counterparty credit risk) and that the MBA results in capital requirements no less than under the LTA, the risk-weighted assets related to the fund's exposures are the sum of the following three items:

<sup>5</sup> To apply one risk weight notch higher means to apply the immediately higher risk weight. For instance, any exposure that is subject to a 20% Standardised Approach risk weight would be weighted at 50% when calculated by a third-party.

<sup>6</sup> Information contained in the fund's mandate could also be drawn from funds' disclosure.

- (i) Balance sheet exposures (ie the funds' assets) are risk weighted assuming the underlying portfolios are invested to the maximum extent allowed under the fund's mandate in those assets attracting the highest capital requirements under the Standardised Approach, and then progressively in those other assets implying lower capital requirements. When banks adopt the MBA, they are only allowed to make use of Standardised Approach risk weights. Banks using an IRB approach must apply the treatment for equity and securitisation positions described in paragraph 13. If more than one risk weight can be applied to a given exposure, the maximum risk weight applicable must be used.<sup>7</sup>
- (ii) Whenever the underlying risk of a derivative exposure (eg equity derivatives under the IRB approach) or an off-balance-sheet item receives a risk weighting treatment (eg as stated in paragraph 84 of Basel II framework), the notional amount of the derivative positions or of the off-balance sheet exposures is risk weighted accordingly.<sup>8</sup>
- (iii) Counterparty credit risk (CCR) associated with the fund's derivative exposures is calculated based on a replacement cost plus an add-on based on the Current Exposure Method (CEM). Whenever the replacement cost is unknown, the exposure measure for CCR will be calculated in a conservative manner by using the notional amount as a proxy for the replacement cost. Whenever the add-on factor is unknown the maximum add-on factor of 15%<sup>9</sup> applies.<sup>10</sup> The risk weight associated with the counterparty is applied to the sum of the replacement cost and add-on as in the Current Exposure Method set out in Annex 4, paragraph 92(i) of the Basel II framework.<sup>11,12</sup>

19. Whenever the risk weights under the above approach are not known, a 1250% risk weight (ie the FBA) is applied to the respective item. Furthermore, under the MBA, when a bank has an investment in a fund (Fund A) that itself has an investment in another fund (Fund B), the bank will be required to look through to the mandate of the second fund (Fund B) to determine the risk weight to apply to the investment of the first fund (Fund A's investment in Fund B). However, for all subsequent layers (eg Fund B's investments in Fund C), the funds' investments in other funds will be risk weighted at 1250%.

#### The fall-back approach

20. Where neither the LTA nor the MBA is feasible, banks are required to apply the fall-back approach (FBA). The FBA applies a 1250% risk weight to the bank's investment in the fund.

<sup>7</sup> For instance, for investments in corporate bonds with no ratings restrictions, a risk weight of 150% must be applied.

<sup>8</sup> If the underlying is unknown, the full notional amount of derivative positions must be used for the calculation.

<sup>9</sup> This corresponds to the highest add-on factor in the matrix as set out in Annex 4, paragraph 92(i) of the Basel II framework, ie as applied to derivative contracts with "Other Commodities" as underlying with a residual maturity over five years.

<sup>10</sup> For instance, whenever the replacement cost and add-on factor is unknown, a total multiplication factor of 1.15 is effectively applied to the notional amount to account for the counterparty credit risk exposure.

<sup>11</sup> Whenever the notional amount of derivatives mentioned in items (ii) and (iii) is unknown, it will be conservatively proxied by the maximum notional amount of derivatives allowed under the mandate.

<sup>12</sup> Note that the MBA mirrors the calculation of counterparty credit risk under the CEM as set out in section VII of Annex 4 of the Basel II framework. The Committee is currently reviewing the Standardised Method and the CEM. As part of this review, the Committee may decide to review the treatment of a fund's derivative exposures under the MBA. For further information about this review, see the Committee's June 2013 consultative document *The non-internal model method for capitalising counterparty credit risk exposures*, available at [www.bis.org/publ/bcbs254.htm](http://www.bis.org/publ/bcbs254.htm).

## D. Incorporating leverage into the framework

### Leverage definition

21. One of the main drivers of risk related to equity investments in funds is their underlying leverage. As such, the Committee proposes to scale up the risk weight derived from the standards described above by an appropriate measure of leverage. For this purpose, the Committee proposes the use of a simple and transparent accounting-based financial leverage measure, defined as the ratio of total assets over total equity. National supervisors will have the discretion to choose a more conservative leverage metric if deemed appropriate.<sup>13</sup> Under the MBA, leverage is taken into account through the maximum financial leverage resulting from the fund's mandate or from the national regulation of the fund.

## E. Resulting capital requirements

22. For a bank to calculate its capital requirements related to its equity investments in funds, one of two options will be applied.

23. Under Option 1, the bank would apply a leverage adjustment to the *average* risk weight of the fund (the calculation of which is described above) up to a cap of 1250%. Risk-weighted assets are then obtained by multiplying the average risk weight scaled up by an appropriate leverage measure with the invested amount. As long as the 1250% cap (see below) does not bind, Option 1 promotes a similar prudential treatment as in proportional consolidation.

24. Under Option 2, the bank would apply a leverage adjustment to the *total* risk-weighted assets of the fund. This is a conservative approach that results in a higher capital requirement than Option 1 for all cases where the fund has leverage and the cap does not bind.

25. Illustrations of how Option 1 and Option 2 are calculated are set out in the annexes to this paper. The LTA calculation is included in Annex 2 and the MBA in Annex 3.

### Option 1 – Apply a leverage adjustment to the average risk-weighted assets of the fund

26. Under Option 1, after calculating the total risk-weighted assets of the fund according to paragraphs 13 and 14 (LTA) or 16 and 17 (MBA), banks will calculate the average risk-weight of the fund ( $Avg\ RW_{fund}$ ) by dividing the RWA by the total assets of the fund. The resulting total risk-weighted assets in respect of a bank's equity investment in a fund ( $RWA_{investment}$ ), after taking into account the leverage of the fund (Lvg) are:

$$RWA_{investment} = Avg\ RW_{fund} * Lvg * equity\ investment$$

27. The effect of the leverage adjustment depends on the underlying riskiness of the portfolio (ie the average risk weight) as obtained by applying Basel II's Standardised Approach or the IRB method. The formula above can therefore be re-written as:

$$RWA_{investment} = RWA_{fund} * percentage\ of\ shares$$

<sup>13</sup> When no information on leverage can be obtained, the fallback risk weight of 1250% applies. No leverage adjustment is needed in the FBA.

The above formula illustrates that Option 1 results in a capital requirement that is equivalent to the requirement that would result from a proportional consolidation of the fund. This approach may therefore be sufficiently conservative.<sup>14</sup>

28. However, it is possible that for certain funds, with low underlying risk weights and high leverage,<sup>15</sup> Option 1 could deliver insufficiently conservative risk weights. Therefore another option would be to incorporate leverage into the framework in a more conservative way as in Option 2.

Option 2 – Apply a leverage adjustment to the total risk-weighted assets of the fund

29. Under Option 2, the resulting capital requirement a bank's equity investment in a fund, after taking into account the leverage is:

$$RWA_{investment} = RWA_{fund} * Lvg * percentage\ of\ shares$$

Annex 4 includes examples of why Option 1 may not be sufficiently conservative for highly-leveraged funds.

## F. Introduction of a cap

30. To ensure consistency of the proposed framework both within the decision tree and Basel III's deduction treatment, a risk weight cap of 1250% is proposed. A bank's exposures in this context include both funded and unfunded exposures (eg committed contingent liabilities such as an unfunded commitment to subscribe to the fund's future capital calls). Formally,

Under Option 1:

$$RWA_{investment} = \min(Avg\ RW_{fund} * Lvg, 1250\%) * equity\ investment$$

Under Option 2:<sup>16</sup>

$$RWA_{investment} = \min\left(RWA_{fund} * Lvg * \frac{1}{total\ equity_{fund}}, 1250\%\right) * equity\ investment$$

31. Any non-contractual commitments, such as implicit support provided by the bank to an investment fund should be addressed through Pillar II.

Q1. The Committee welcomes views on: (i) the proposed definitions of leverage; and (ii) options for incorporating leverage into the calculation of risk weighted assets.

Q2. The Committee welcomes views on the proposed policy framework.

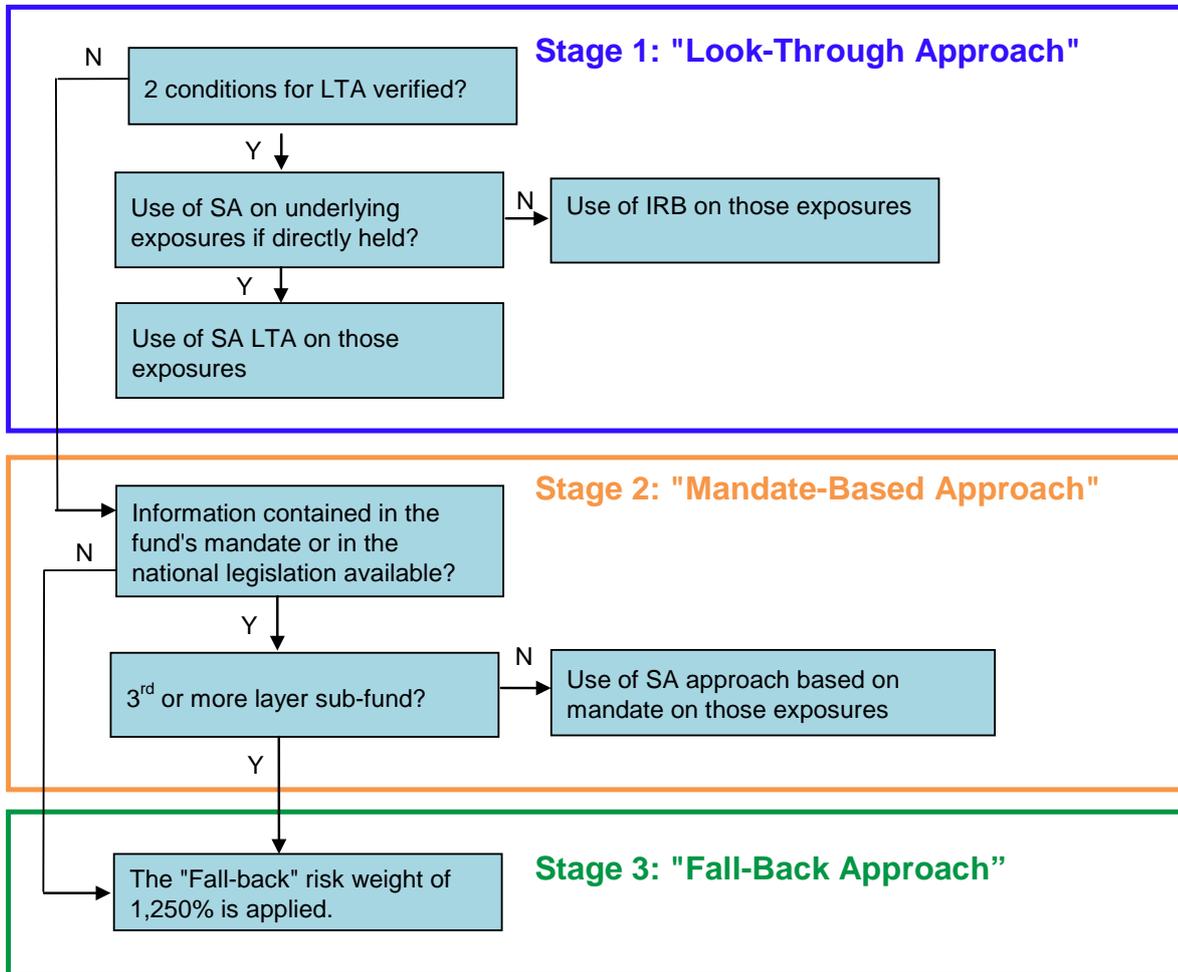
<sup>14</sup> The rearranged formula,  $RWA_{investment} = RWA_{fund} * percentage\ of\ shares$  is equal to Option 2 without the leverage multiplier.

<sup>15</sup> An example could be a highly leveraged global macro fund investing in safe fixed income securities.

<sup>16</sup> Since Option 2 results in a conservative treatment, the cap of 1250% would be reached fairly quickly. For example, a fund with average risk weight of 50% would reach the cap for any leverage value above 5.

## Annex 1

### The 3-step decision tree framework



## Annex 2

### Calculation of the LTA - Example

Consider a fund that replicates an equity index. Assume the following:

- Bank uses Basel's Standardised Approach for calculating capital requirements for credit risk;
- Bank owns 20% of the shares of the fund;
- The fund holds short term (less than one year) forwards position that are cleared through a qualifying central counterparty (with a notional amount of \$ 100); and
- The fund presents the following balance sheet:

#### Assets

Cash	\$ 20
Government Bonds	\$ 30
Variation Margin Receivable on the forward	\$ 50

#### Liabilities

Notes Payable	\$ 5
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#### Equity

Shares	\$ 95
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Balance sheet exposures of \$100 will be risk weighted according to the risk weights applied for cash (RW=0%), government bonds (RW=0%), and equity forwards (RW=2%). The underlying risk weight for equity exposures (RW=100%) is applied to the notional amount of the forward contracts and there is a charge for counterparty credit risk.

The leverage of the fund is  $100/95=1.05$ .

Therefore, the risk-weighted assets associated with the bank's equity investments in the fund are:

Under Option 1:

$Avg\ RW_{fund} * Leverage * Equity\ investment =$

$$\frac{(RWA_{cash} + RWA_{bonds} + RWA_{forward} + RWA_{underlying} + RWA_{CCR})}{Total\ Assets_{fund}} * Leverage * Equity\ investment =$$

$$((\$20*0\% + \$30*0\% + \$50*2\% + \$100*100\% + \$100*6\%*2\%)/100) * 1.05 * (20\%*95) = \$20.17$$

Under Option 2:

$RWA_{fund} * Leverage * Percentage\ of\ shares =$

$$(RWA_{cash} + RWA_{bonds} + RWA_{forward} + RWA_{underlying} + RWA_{CCR}) * Leverage * Percentage\ of\ shares =$$

$$(20*0\% + 30*0\% + 50*2\% + 100*100\% + 100*6\%*2\%) * 1.05 * 20\% = \$21.24$$

## Annex 3

### Calculation of the MBA - Example

Consider a fund with assets of \$100 where it is stated in the mandate that the fund replicates an equity index. In addition to being permitted to invest its assets in either cash or equities, the mandate allows the fund to take long positions in equity index futures up to a maximum nominal amount equivalent to the size of the fund's balance sheet (\$100). This means that the total on balance sheet and off balance sheet exposures of the fund can reach \$200. Consider also that a maximum financial leverage of 1.1 applies according to the mandate. The bank holds 20% of the shares of the fund, which represents an investment of \$19.

First, the on-balance sheet exposures of \$100 will be risk weighted according to the risk weights applied for equity exposures ( $RW=100\%$ ), ie  $RWA_{\text{on-balance}} = \$100 * 100\% = \$100$ .

Second, we assume that the fund has used up its limit on the derivative positions, ie \$100 notional amount, which would be risk weighted with the risk weight associated with the underlying of the derivative position, which in this example is 100% for publicly traded equity holdings. The total risk-weighted assets related to the maximum notional amount underlying the derivative positions are hence  $RWA_{\text{underlying}} = \$100 * 100\% = \$100$ .

Third, we would calculate the counterparty credit risk associated with the derivative contract. If we do not know the replacement cost related to the futures contract, we would approximate it by the maximum notional amount, ie \$100 and also calculate the add-on by applying a 15% conversion factor, resulting in an exposure amount of \$115. Assuming the futures contract is cleared through a qualifying CCP, a risk weight of 2% applies, so that  $RWA_{\text{CCR}} = \$115 * 2\% = \$2.3$ .

The RWA of the fund is hence obtained by adding  $RWA_{\text{on-balance}}$ ,  $RWA_{\text{underlying}}$  and  $RWA_{\text{CCR}}$ , ie \$202.3.

Under Option 1:

The RWA (\$202.3) will be divided by the total assets of the fund (\$100) resulting in an average risk-weight of 202.3%. The average risk-weight is then scaled up by a factor of 1.1 to reflect financial leverage =  $202.3\% * 1.1 = 222.53\%$ . Finally, as the bank invested \$19 in the equity of the fund, its total RWAs associated with its equity investment amount to  $\$19 * 222.53\% = \$42.28$ .

Under Option 2:

Finally, as the bank holds 20% of the shares of the fund, its total RWAs associated with its equity investment amount to  $20\% * 1.1 * \$202.3 = \$44.51$ .

Note further that if, according to the mandate or national regulation, the futures positions were exclusively used for hedging purposes (ie were covered short), no effective leverage would actually be generated through the derivative position and hence no RWAs would need to be calculated on the underlying ( $RWA_{\text{underlying}}$ ).

## Annex 4

### Leverage adjustment under Option 1 - Example

Consider a fund that invests in corporate debt with assets of \$100. Further, assume that the fund is highly levered with equity of \$5 and debt of \$95. Such a fund would have a financial leverage of  $100/5=20$ . Consider 2 cases:

*Case 1: Fund specialises in low rated corporate debt*

#### **Assets**

Cash	\$ 10
A+ to A- bonds	\$ 20
BBB+ to BB- bonds	\$ 30
Below BB- bonds	\$ 40

The average RW of the fund is  $(\$10*0\% + \$20*50\% + \$30*100\% + \$40*150\%)/\$100 = 100\%$ . The financial leverage of 20 would result in a risk weight of 2000% for the banks' investment in this highly leveraged fund; however, this is capped at the conservative RW of 1250%.

*Case 2: Fund specialises in high rated corporate debt*

#### **Assets**

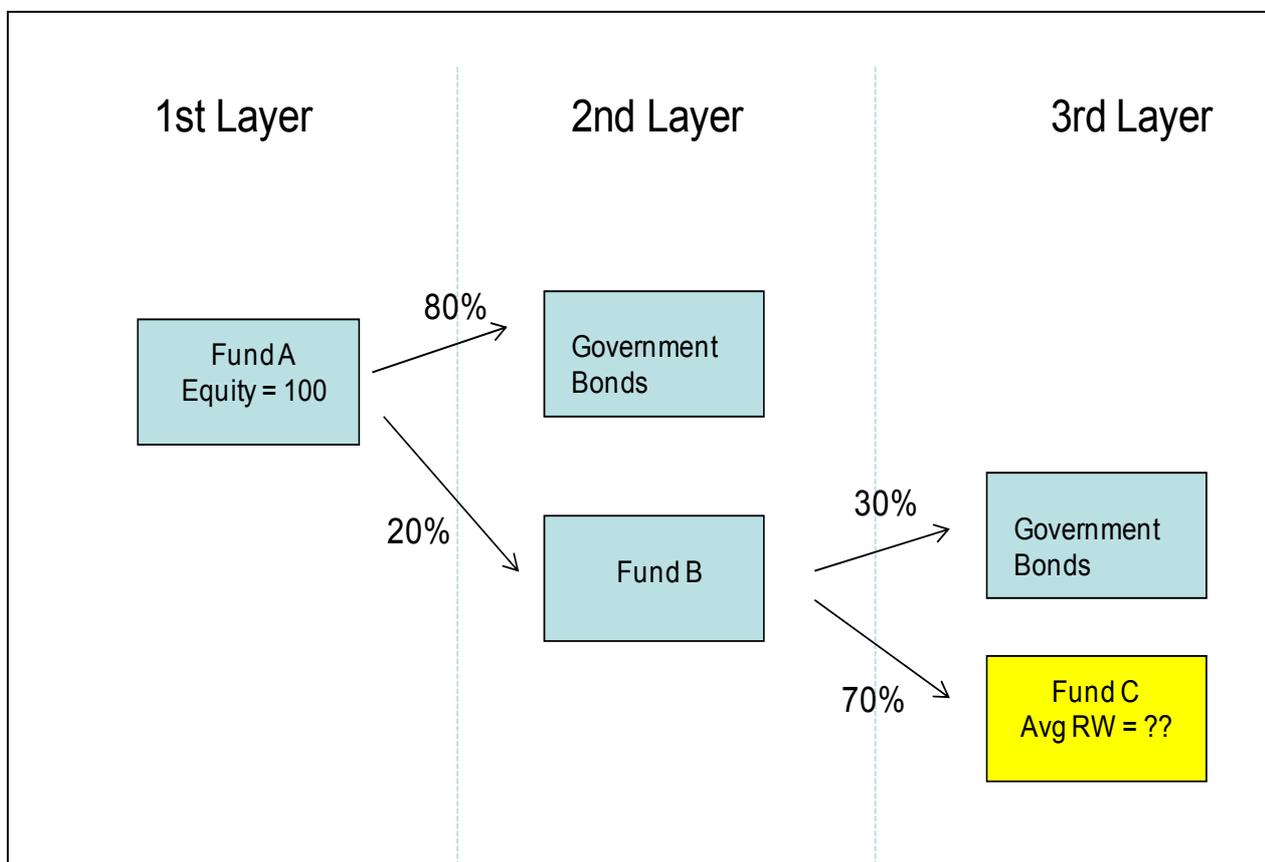
Cash	\$ 5
AAA to AA- bonds	\$ 75
A+ to A- bonds	\$ 20

The average RW of the fund is  $(\$5*0\% + \$75*20\% + \$20*50\%)/\$100 = 25\%$ . The financial leverage of 20 results in a RW of 500%, which may not be sufficiently conservative for the banks' investment in such a highly leveraged fund.

The speed at which the 1250% cap is reached depends on the underlying riskiness of the portfolio (the average RW) as captured by Basel II standardised risk weights or the IRB method. Therefore, for a "risky" portfolio (100% average RW), the 1250% limit is reached fairly quickly with a leverage of 12.5x, while for a "low risk" portfolio (25% average RW) this limit is reached at a leverage of 50x.

## Annex 5

### Subsequent layers' treatment - Example



Consider that bank A has invested \$ 100 in 100% shares of fund A; that funds A, B and C have leverage equal to 1 and that Avg RW of fund C is unknown.

Under the LTA, capital requirements for bank A's equity investments in fund A is:

Under Option 1:

$Avg\ RW_{fund} * Leverage * Equity\ investment =$

$$(80% * 0% + 20% * (30% * 0% + 70% * 1250%)) * 1 * (100% * \$ 100) = \$ 175$$

Under Option 2:

$RWA_{fund} * Leverage * Percentage\ of\ shares =$

$Avg\ RW_{fund} * Total\ Assets * Leverage * Percentage\ of\ shares =$

$$(80% * 0% + 20% * (30% * 0% + 70% * 1250%)) * 100 * 1 * 100% = \$175$$

Note that if bank A was using the MBA, instead of the LTA, a risk-weight of 1250% would apply to Fund C irrespective of the availability of its mandate, because the MBA is only applied up to the 2<sup>nd</sup> layer investment.