

Committee of European Banking Supervisors (CEBS) - Questionnaire on the survey of market practices with regard to Large Exposures

Please comment in respect of your approach to both trading and non trading book issues and also where relevant to on and off balance sheet items.

| General approach to concentration risk: | |
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| 1. | <p>In general terms do you, for internal purposes, adopt an approach to concentration risk measurement and management which is closely linked to the limits and reporting requirements contained in the current national regulatory regime. If so, please describe your approach. Note if your answer to this question is positive, many of the questions set out below may not be relevant to your circumstances.</p> |
| | <p><i>Trading:</i></p> <p>With regard to the current national regulatory regime it is important to distinguish between two sets of national rules:</p> <p>The German Banking Act (KWG – Kreditwesengesetz) contains certain requirements concerning the single-name risk (§§ 13, 13a and 13b KWG). Based on the KWG provisions is the Groß- und Millionenkreditverordnung (GroMiKV). GroMiKV and §§ 13 ff. of KWG are the national implementation of the European large exposure rules. Overall we consider this regulatory approach outdated, as in most cases it does not appropriately reflect actual economic risk.</p> <p>A separate set of rules are the Minimum Requirements for Risk Management (MaRisk – Mindestanforderungen an das Risikomanagement). The MaRisk are the national implementation of pillar 2 and are based on § 25a KWG. Their main elements are:</p> <ul style="list-style-type: none"> - consideration in the ICAAP - consideration in the risk strategy - measurement of credit risk including concentrations - measurement of specific market risk - reporting details e.g. sectors, countries etc. <p>The pillar II requirements laid down in the MaRisk leave the banks with sufficient flexibility to implement their own strategic and business-adapted</p> |

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| | | <p>approach to concentration risk management that allows the existing wide variety of business models to be adequately managed. The banks' internal methods cover aspects such as the credit unit (Kreditnehmereinheit) as well as the portfolio level (size class, maturity, country/region, products and industry sector). With regard to the pillar II requirements, concentration risk management is closely linked to the current national regulatory regime. However, as said earlier, it has little to do with the EU large exposure rules.</p> |
| | | <p><i>Non trading:</i></p> <p>What has been said about trading also applies for non-trading. However, the disconnect between the EU large exposure rules and the internal methods in this case is not as big as on the trading side.</p> |
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| | <p>Nature of concentration risk:</p> | |
| <p>2.</p> | <p>What is your understanding of the nature of concentration risk? In answering this question you might address:</p> | <p>The usual definition is that concentration risk refers to a lack of diversification of a credit portfolio. In particular, concentration risks can occur with regard to the following aspects:</p> <ul style="list-style-type: none"> - countries/regions, - industry sectors, - single name risk, - maturity, - size class, - credit risk mitigation. |
| | <ul style="list-style-type: none"> • How you define the risk of loss resulting from concentration of risk in the credit portfolio? | <p>In most cases concentration risk is defined as the risk of an unexpected accumulation of credit related losses within a given time horizon. The origin of the accumulation (single name vs. aggregates by selected attributes) is a priori not relevant here. Concentration risk accounts overproportionally for unexpected losses and less for expected losses. Whether a risk will be considered a concentration risk depends on the level of the unexpected loss,</p> |

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| | | <p>which is usually measured as (Credit) Value at Risk (CVaR).</p> <p>In practice the risk is often computed given the actual portfolio, assuming correlations or dependence between the obligors. That means there is no separate measure of concentration risk, only of total credit risk, which is measured by a credit portfolio model.</p> |
| | <ul style="list-style-type: none"> • What is it you are managing when you consider significant single name exposures and concentrations in your credit portfolio? | <p>When managing concentration risk, most banks use the following parameters (or some of these):</p> <ul style="list-style-type: none"> • Limit and Risk Capital consumption for each borrower; • Share of top clients by limit, usage, Risk Capital, also for each industry sector; • Limit, Usage, LGD, EaD and Risk Capital share per size class, maturity, region and industry sector. <p>Some banks also distinguish between the portfolio level and the single name level:</p> <p>Portfolio Context => Strategic Level</p> <p>Concentration risk management in this context consists of actions to enforce, encourage or monitor the diversification of the credit portfolio. Essentially this works by increasing the granularity of the portfolio and/or reducing the average dependence of the obligors. The effect is to reduce portfolio credit risk and therefore Credit-VaR, or alternatively by allowing higher volume for the same Credit-VaR. Along the way, not only the default risk is diversified, but also the dependence on single default risk parameters, such as PD per obligor. Thus model risk is possibly also reduced implicitly.</p> <p>The internal capital adequacy framework and in particular the German MaRisk adequately regulate this context. The motivation for concentration risk management in this context is an internal management issue, i.e. the optimal use and allocation of risk capital and therefore improvement of the risk adjusted return.</p> <p>Single Name Context => Operative Level</p> <p>A different meaning of concentration risk emerges in the internal operative</p> |

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| | | <p>exposure limitation and different credit granting authorities in banks. Here banks often operate on fairly simple exposure limits. Limits set in this context could also be set to lock-in or encourage certain portfolio structures not directly related to concentration risk, such as limits on the total exposure in a certain rating class.</p> <p>Concentration risk management in this context is a tactical function often delegated throughout the organization and may be as much a function of business management as it is a function of risk management. These internal rules are often an implementation of strategic internal goals.</p> |
| | <ul style="list-style-type: none"> • What, for internal risk measurement and management purposes do you consider to be the risks associated with: | |
| | <p>(a) Single name concentration risk;</p> <ul style="list-style-type: none"> • Event risk (defaults of clients with large exposures causing high amounts of losses at once); • Correlation among single borrowers. <p>For example,</p> | |
| | <ul style="list-style-type: none"> • Do you consider such risks as being related to ensuring that portfolio credit risk capital calculations are not undermined by incorrect correlation or diversification assumptions? | <p>Most banks answered no (they consider this model risk). One bank answered yes.</p> |
| | <ul style="list-style-type: none"> • Do you consider such risks to be related to 'tail event' losses – i.e. to protect against losses in the distribution beyond a chosen confidence interval? | <p>Concentration risk is conceptually related to tail events – as only high portfolio losses contribute to the tail of a portfolio loss distribution. The second part of the question is confusing in this respect as it mixes risks, protection and the definition of expected shortfall.</p> |
| | <ul style="list-style-type: none"> • Do you consider them to be related to aspects of model risk or the real world simply not fitting the modelled world? | <p>Most banks answered no. However, one bank answered yes and pointed out that from their viewpoint concentration risk is more on the extreme side and therefore not easily included in a model even with a high confidence level</p> |
| | <ul style="list-style-type: none"> • Do you consider them to be related to time horizon aspects – e.g. large unexpected losses occurring over a short timescale rather than over the normally considered horizon | <p>No, the time horizon is pre-fixed depending on application. Concentration risk is not about time horizon sensitivity.</p> |

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| e.g. 1 year? Etc.) | |
| What, for internal risk measurement and management purposes do you consider to be the risks associated with: | |
| <p>(b) Other concentration risk (for example—sectoral or geographic);</p> <ul style="list-style-type: none"> • Region, industry sector: significant deteriorations of market conditions for all clients within one region/industry sector, e.g. caused by macroeconomic development, law changes or other stress events • Correlations between borrowers within one market, region etc. <p>For example,</p> | |
| <ul style="list-style-type: none"> • Do you consider such risks as being related to ensuring that portfolio credit risk capital calculations are not undermined by incorrect correlation or diversification assumptions? | See above for single name concentration risk. |
| <ul style="list-style-type: none"> • Do you consider such risks to be related to 'tail event' losses – i.e. to protect against losses in the distribution beyond a chosen confidence interval? | See above for single name concentration risk. |
| <ul style="list-style-type: none"> • Do you consider them to be related to aspects of model risk or the real world simply not fitting the modelled world? | See above for single name concentration risk. |
| <ul style="list-style-type: none"> • Do you consider them to be related to time horizon aspects – e.g. large unexpected losses occurring over a short timescale rather than over the normally considered horizon e.g. 1 year? Etc.) | See above for single name concentration risk. |
| We would be grateful if respondents could in their concentration risks aspects. | responses distinguish as clearly as possible between single name and other |
| Counterparties and relationships between counterparties for single name concentration risk: | |

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| 3. | <p>For your internal risk measurement and/or management purposes, how do you define 'connectedness' of counterparties? What factors do you consider determine 'connectedness'? To what extent and how, for your internal risk measurement and/or management purposes, do you take account of relationships/ connections between counterparties (e.g. parent and subsidiary)?</p> | <p>Generally, "connectedness" is assumed when the risk profiles of different counterparties depend on the same risk factors.</p> <p>Most banks in the answers focused on the group dimension. In general the focus lies on the economic linkage between counterparts and not on the legal dimension (economic obligor concept). Often they generally follow the structure of the group hierarchy as provided by the client, but, if appropriate, may add risk that is economically tied to the same group (e.g. related to guarantees, special purpose companies, leasing, single supplier relationship etc.). The latter often exceeds the requirements of German regulations (KWG 19 II).</p> <p>One bank answered that other factors that can establish a connectedness between counterparties are aspects such as the value creation chain, dependency on certain markets or belonging to a certain region/group of countries.</p> |
| 4. | <p>For your internal risk measurement and/or management purposes how do you approach the issue of exposures to entities or products consisting of underlying assets or items (e.g. exposures to special purpose entities, collective investment units)?</p> | <p>Some banks said that in this area there is so much change under way, therefore they would use various options.</p> <p>Several banks answered that the issue is pragmatically addressed by a look through approach, often based a gain vs. cost assessment. However, the degree to which the look through approach is being used often depends on aspects such as:</p> <ul style="list-style-type: none"> - the available amount of information on the underlying assets, - how the credit risk of an asset pool is divided into pieces and which piece the bank holds, - whether a rating exists for the respective company or its product, - the size of the exposure. <p>One bank stated that their internal risk measurement Economic Capital (EC) is currently based on the US GAAP consolidation circle. As such they would typically calculate EC on exposures</p> <ul style="list-style-type: none"> • to special purpose entities if they are not consolidated under US GAAP • booked within these special purpose entities if they are consolidated. |

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| | In what circumstances if any do you adopt a 'look through' approach? | <p>One bank answered that they may adopt the "look through approach" in the calculation of market risk EC on trades made up of numerous underlying positions (e.g. a position in a standard index). The decision to apply the look through approach is based on a number of factors, including data availability and system constraints.</p> <p>Another bank stated that in most cases they would currently not adopt a look through approach.</p> |
| | How do you calculate your risks in this context? | <p>One bank explained when adopting the "look through approach", they would model the risks as if they held positions in each of the underlying assets.</p> <p>Another bank considers a respective financing as a risk entity (in these cases specific model parameters are being used for PDs, CCF etc.).</p> |
| | Measurement of exposures: | |
| 5. | For internal measurement purposes, how do you define the amount at risk? In particular please outline your approach to: | Amount at risk? Various approaches are being used; in some banks to different limits (within the bank) even different exposure definitions might be applied: In some cases each transaction receives an EAD, which, where applicable, identical to the EAD under IRB-AA. |
| | Loans: | Various definitions are being used (Utilisation + CF* Free Limit; 100% for outstanding). |
| | Undrawn facilities: | Various definitions are being used (Utilisation(=0) + CF* Free Limit; specific CCF; depending of the backtested possibility of drawings within a one year horizon) |
| | Guarantees and similar obligations: | Various definitions are being used (CF*Aval Limit; specific CCF; depending on the guaranteed obligation and the PD of the borrower). |
| | Derivative exposures (with future volatility): For products where future exposure may fluctuate please outline your approach to this aspect (e.g. use a confidence interval, worst case scenario, other – | <p>Various approaches are being adopted. For example depending on purpose:</p> <ul style="list-style-type: none"> • Limit monitoring: Peak exposure until maturity (95% confidence level) • Internal Capital: Treatment among banks is different: current credit exposure, average expected exposure over 1 year, time dependend |

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| <p>please specify).</p> | <p>expected exposures until maturity</p> <ul style="list-style-type: none"> • Basel I: Current Credit Exposure + add-on • Basel II : EPE (1 year) <p>Netting and margining considered within respective eligibility.</p> |
| <p>Structured transactions:</p> | <p>See derivatives exposure.</p> |
| <p>Intra day exposures:</p> | <p>Some banks use utilisation; some don't consider this part of concentrations risk management.</p> |
| <p>Settlement exposures:</p> | <p>Some banks use the same methods as for loans; some don't consider this part of concentration risk management.</p> |
| <p>If there are any other factors that influence the measurement of risk, please specify.</p> | <p>For commercial loans undrawn facility limits guarantees and other collateral (recovery values) are reflected in a Loss Given Default (LGD) algorithm. Derivatives Exposures are calculated on a net basis, i.e. the impact of netting and collateral agreements is part of the exposure simulation.</p> |

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| <p>6.</p> | <p>For your internal risk measurement and/or management purposes, how do measure:</p> <p>(a) Single name concentration risk? ;</p> <p>(b) Other concentration risk? – sectoral, geographic, etc.</p> <p>In answering this question we would be grateful if you would provide a detailed explanation of the conceptual basis of your approach in this regard – VaR, expected shortfall, etc? Please provide actual and concrete examples.</p> | <p>(a) Single name concentration risk?</p> <p>Several banks answered that the measurement of single name concentration risk is integrated into the economic capital framework on the basis of a Credit VaR approach. Credit VaR will be determined for individual business transactions. In a second step they will be aggregated; single name concentration then is the sum of all CVaR amounts which are allocated to one risk basket.</p> <p>This allows for calculating Credit Risk Economic Capital across the whole capital structure and across and within groups and issuers via a loss distribution approach and for allocating it down to transaction level by the Expected Shortfall measure. In some cases issuer risk is also captured within the Economic Capital process, but a variety of risk metrics are used within the daily monitoring, e.g., LGD (with non zero recovery rate), LGD 0% (with zero recovery rate), RR05 (change in LGD for a 5% change in recovery rate), cs01, RST (vol weighted), and equity greeks.</p> |
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| | | <p>Examples:</p> <p>(b) Other concentration risk? – sectoral, geographic, etc. Most banks use CVaR approaches similar to those adopted for single name risk. A Credit Risk Economic Capital results on transaction level can be aggregated by various attributes including industry class or geographical region.</p> <p>Examples:</p> |
| 7. | <p>Are these approaches closely integrated into your internal business decision-making? – please give examples*.</p> | <p>Single name risks:</p> <p>Economic Capital, risk sensitivity considerations, portfolio approaches and approaches on the level of single credit units are an integral part of the banks' credit decisions, pricing, limits, decisions about the usage of credit risk mitigation techniques, ICAAP process, strategy making and reporting to the top management and/or the supervisory board.</p> <p>Examples for the integration into the business decision-making are:</p> <ul style="list-style-type: none"> • A rating driven process to price credit risk for cash credits as well as derivatives and to hedge these credit risks according to a pre-defined threshold for certain rating categories or individually agreed risk limits, respectively • an extensive industry risk management process by which exposures are aggregated on industry levels and explicit exposure and capital allocation targets are set for individual industries based on the relevant industry risk profile and the associated business and profitability characteristics • a broadly applied methodology to calculate economic capital, expected loss and profitability at individual counterparty level. Credit decisions throughout the business are based on stringent application of |

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| | | <p>profitability hurdles and in consideration of capital allocation effects</p> <ul style="list-style-type: none"> • a strictly monitored country risk framework also based on capital allocation, including a comprehensive range of limits and risk appetite bands for our business in Emerging Markets • analysis of maturity profiling and alternative hedge strategies (e.g., commodities hedge) in particular for issuer risk • monitoring of these risk/strategies via at least quarterly portfolio reviews allowing for timely adjustment of strategies if necessary |
| | | <p>Other Concentration risk aspects:</p> |
| | | <p>The limitation of risk on a portfolio level (industry sector, regions) is ensured for example by "traffic light" approaches (signals are being given to the operative units and have to be taken into account in the credit decision process).</p> |
| | | <p>Within credit portfolio models certain driving forces of risk concentration (for example region or industry sector) affect the results of the CVaR calculations and thus influence the advantageousness of individual business transactions.</p> |
| | | <p>Examples: E. g. reports, limits, profit centre calculation</p> |
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| | For how long have you adopted this approach? | <p>Approaches for the risk sensitive management of portfolios have been existing for many years and developed further continuously. Also systems to base the credit decision competences on rating results have been introduced many years ago.</p> <p>Current systems and more sophisticated approaches such as the CVaR have been introduced during the last years.</p> |
| | *We would be grateful if respondents could in their responses distinguish as clearly as possible between single name and other concentration risk aspects. <i>There is conceptually no distinction (see question 6)</i> | |
| 8. | In relation to securities financing transactions (repurchase agreements, securities/commodities lending/borrowing agreements, margin lending), what approach do you take to the measurement of single name exposures? Do you make use of an 'expected positive exposure' methodology? Please describe in detail the approach adopted and the conceptual basis. | <p>Single name risks: <i>In this regard a variety of related simulation based approaches, which only differ in parameterisation, exists:</i></p> <ul style="list-style-type: none"> <i>See question 5 ("Derivatives exposure"). The approach outlined applies to SFTs but is not limited to them. AEE is related to EPE but not identical as it does not comprise the unjustified assumption that exposure may never come down again.</i> <i>A Worst Case Exposure (Potential Future Exposure, PFE) based on simulations will be calculated (confidence level of 97,5%, duration of 10 days).</i> <i>Single name exposures are calculated following an expected positive exposure methodology. Within this approach netting and margining rules (e.g. within collateral agreements) are integrated as well. Expected positive exposures are principally simulated as time dependent profiles.</i> <p>Repos/Reverse repos: <i>See above</i></p> <p>Securities/commodities lending/borrowing: <i>See above</i></p> |

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| | | Margin lending: <i>See above</i> |
| Monitoring and management of risk: | | |
| 9. | What is your approach to the management of single name concentration risk and other concentration risk (e.g. sectoral, geographic, etc.) Please provide a comprehensive and detailed descriptions and explanations. | Concentration risk is managed individually across institutions, and even within institutions, concentration risk management varies for different types of concentration. E.g. country concentration may be managed differently to sectoral concentrations. Institutions use approach that best fit their specific business and risk management needs. A detailed description across all institutions is not possible in the short time frame. Furthermore a comprehensive answer is not possible because the question is very vague; to answer it appropriately a direct dialogue between supervisors and banks is necessary. Therefore, the following answers are do not fully captured the matter but give rather examples. |
| Single name concentration risk: | | |
| We would be grateful if you would provide a detailed explanation of the approach(es) you use to manage single name concentration risk? You might address: | | |
| | <ul style="list-style-type: none"> A full explanation of the conceptual basis for the approach that you operate. | <p>The risk management is based on CVaR of the single credit unit. Those credit units are considered a concentration risk that account for more than certain amount of economic capital. The limit is set at higher, certain amount of ec. Capital; exceptions are possible with the approval of the management board (in this case a special risk management including for example CDS is triggered).</p> <p>The major driving forces for the calculation of economic capital are volume, duration/maturity and creditworthiness (Bonitätsanalyse) which themselves are influenced by sectoral and regional aspects.</p> |
| | <ul style="list-style-type: none"> Whether, and to what extent, the type of counterparty is a material factor in determining your approach to managing and mitigating the risk? For example corporates, credit institutions and investment firms, other | In principle the full range of risk mitigation techniques is being used. Counterparty specific emphasis is due to differences in the liquidity of markets for particular instruments/reference assets. |

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| <p>financial, government, SPEs/structured transactions.</p> | |
| <ul style="list-style-type: none"> To what extent, if any, is the creditworthiness of the counterparty an important factor in the management of concentration risk. How is this aspect taken into account? | <p>The Rating and the loan size indicates the creditworthiness in the calculation of economic capital as well as in the decision about credit competences.</p> |
| <ul style="list-style-type: none"> Whether you use an approach based on limits? If so, what are those limits? Do you set absolute limits (e.g. €50m) or limits relative to something else (e.g. 10% of capital)? If you use relative limits, what do you measure against? What factors do you take account of in setting limits (e.g. product type, banking book/trading book, tenor, rating, type of counterparty, creditworthiness of the counterparty)? Do you set limits by counterparty or product? To what extent, if any, are portfolio effects recognised? | <p>Absolute limits are used as well as relative ones (like x per cent of capital).</p> |
| <ul style="list-style-type: none"> Whether you adopt an approach based on capital allocation in your management of risk. If so, please provide a detailed description/explanation? | |
| <ul style="list-style-type: none"> Other than limits and/ or capital allocation, do you use any other risk management methodologies to manage single name exposure? If so, please tell us what you do and why. | |
| <p>Other concentration risk (sectoral, geographic etc):</p> | |
| <p>We would be grateful if you would provide a detailed explanation of the approach(es) you use to manage other concentration risk (sectoral, geographic, etc). You might address:</p> | |
| <ul style="list-style-type: none"> A full explanation of the conceptual basis for the approach that you operate. | <p>The limitation of risk concentration (regional, industry sector, products and customer groups) on a portfolio level is ensured by specific "traffic light"</p> |

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| | | systems. |
| | <ul style="list-style-type: none"> • Indication of other types of concentrations of credit risk you consider in your risk management (e.g., sector, country, collateral issuer – concerning the latter see question 13 below). | |
| | <ul style="list-style-type: none"> • How do you manage those concentrations (e.g. limits, capital allocation, or more informal monitoring etc). | |
| | <ul style="list-style-type: none"> • If you use limits, what factors you take into consideration in how they are set (e.g. credit rating of the government in setting country limits)? | |
| | <ul style="list-style-type: none"> • How you determine geographic, sectoral and/or other 'clustering' limits? | |
| | <ul style="list-style-type: none"> • Whether you use any risk mitigants against the concentrations identified above? If so, what are they? How do you take account of them? | We refer to question 2. |
| | Stress testing: | |
| 10. | <p>Do you adopt an approach to managing concentration risk based on stress testing? If so please provide a detailed description/explanation.</p> <p>In your response you might include the events / situations for which you test; the conceptual basis for your approach in this regard; how often you carryout stress tests; and on what proportion of your exposures</p> <p>We would be grateful if respondents could in their responses distinguish as clearly as possible between single name and other concentration risk aspects.</p> | <p>Single Name concentration risks:</p> <p>Several banks do not conduct stress tests for single name concentration risk as they do not consider them methodologically appropriate.</p> <p>In other cases stress tests are being applied using a single client approach (analysis of selected large clients under scenario assumptions) and a global approach in order to evaluate scenario impact on Risk Capital and Expected Loss. Single borrowers as well as sectors/regions with significant sensitivity on certain scenarios are being identified by these approaches. Scenario impact on correlations is considered in the stress testing approaches.</p> |

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| | | <p>In the process of calculating economic capital some banks do not only stress the PD and the LGD but also the correlation matrix. Additionally, for special events a qualitative impact assessment will be conducted for the whole portfolio.</p> <p>Events and situations for which you test?</p> <ul style="list-style-type: none"> • Regularly for a standardised recession event. • On demand in response to recent market events (e.g., oil price hike, Iran crisis) but also by assuming multiple defaults, various relative movements in capital structure (e.g., based on GM asset movements on Kerkorian/rating downgrade scenario last year), credit spread movements, ERS, etc. <p>Conceptual basis for your approach?</p> <ul style="list-style-type: none"> • Portfolio revaluation under constraint or • Translation of an economic scenario into constraints to the risk factors driving our Economic Capital model. Derivation of changes to counterparty ratings, Expected Loss and Economic Capital by means of a portfolio simulation under these constraints. <p>How often do you carry out stress tests and on what proportion of exposures?</p> <ul style="list-style-type: none"> • Ad hoc or quarterly on the group portfolio. <p>Other concentration risks: As for single name concentration risks – there is no need to distinguish as coverage and scenario definition are flexible (see question 6).</p> <p>Events and situations for which you test?</p> <p>See above</p> <p>Conceptual basis for your approach?</p> <p>See above</p> |
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| | | How often do you carry out stress tests and on what proportion of exposures? See above |
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| Single entity vs. Group level: | | |
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| 11. | Do you set limits and/or apply your concentration risk measurement and management policies at a group level, subgroup level, and/or at individual entity level? Please provide details and explanation. | Mostly the limits and policies are applied on a group level. However in some cases limits are also set on a single entity level. |
| | | Please provide details and explanation: Group level only: All credit exposures are consolidated both on a client and our own group level to a total group limit and exposure. Individual entity level will neither be able to identify true concentration nor diversification. Mixed approach: Concentration risk management uses varying level depending on the importance of the particular issue: Group, Sub-Group and Legal Entity (in parts also several levels at the same time). |
| 12. | In relation to intragroup exposures please describe in detail the approach that you adopt. | Intragroup exposures: How do you set limits? No limit monitoring to internal accounts. Limits are set at the counterparty and country level (limits might be influenced by the function of a entity within the group). Capitalisation of foreign legal entities is managed to regulatory constraints but not a concentration risk issue. |
| | | How do you allocate economic capital? Internal transactions do not attract any Economic Capital. |
| | How do you approach the question of cross border intragroup exposures? | How do you set limits? see above |

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| | | How do you allocate economic capital? see above |
| | Please provide as detailed as possible an explanation of the conceptual basis for your approaches in the above regards. | |
| Credit risk mitigation: | | |
| 13. | Do you use credit risk mitigation techniques as part of your approach to reduce single name concentration risk? | Yes. All kinds of techniques (including guaranties, netting, hedging) that can be evaluated are being used in order to enhance risk management discipline, improve returns and use capital more efficiently: <ul style="list-style-type: none"> to reduce single-name and industry credit risk concentrations within the credit portfolio, and to manage credit exposures actively by utilizing techniques including loan sales, securitization via collateralized loan obligations, and single-name and portfolio credit default swaps. |
| | If so, please describe the methods that you use (e.g. collateral, guaranties, netting etc) and the circumstances in which you would adopt a particular approach and why you use that approach. | (Type:) In principle, banks use all mitigation techniques available to reduce credit risk as such. Whether that credit risk is reflected in the exposure figures is more a question of practicability and estimated recovery. A detailed list would be misleading, as actual recognition of risk mitigants is a question of business strategy and effort. |
| | | (Circumstances:) |
| | | (Rationale:) |
| | Funded credit protection: | |
| | <ul style="list-style-type: none"> What types of collateral you use to reduce large exposure calculations for your internal purposes. Does this include collateral not recognised for regulatory capital purposes – | Reflecting any mitigant within its potential is essential to correctly assess the bank's risk profile. Banks need to be flexible to adopt newly developing measures and must not be constrained by "regulatory eligibility". |

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| <p>please describe and explain your reasons.</p> | |
| <ul style="list-style-type: none"> How you calculate the value, exposure, or loss reduction to be attributed to funded protection applied to large exposures? How you haircut the value of the collateral? How you take account of the frequency of re margining? | <p>Impersonal collateral is valued at liquidation value minus haircut. Margining is considered by setting time horizon accordingly.</p> |
| <ul style="list-style-type: none"> How do you take account of correlation between collateral asset values and events (systemic, idiosyncratic) giving rise to or arising from the default of the counterparty (e.g. the need to realise a large amount of collateral in a short space of time). | <p>Considered in the haircut which differs by collateral type.</p> |
| <ul style="list-style-type: none"> Whether you use a 'top slicing' approach – i.e. using credit protection to reduce the uncovered part of the exposure to a particular level e.g. the internal limit? | <p>Credit approval may only be given subject to acquisition of credit protection.</p> |
| <ul style="list-style-type: none"> Where you use netting agreements, the basis on which you calculate the net exposure? Please explain any differences between the regulatory and risk management netting sets (e.g. on balance sheet, off balance sheet, banking book/trading book etc). | <p>Legally enforceable netting is considered – generally a superset of netting agreements eligible for regulatory purposes.</p> |
| <p>Unfunded credit protection:</p> | |
| <ul style="list-style-type: none"> What forms of unfunded protection you recognise as reducing credit risk (e.g. guarantees, credit derivatives)? In what circumstances do you use these approaches? | <p>All.</p> |
| <ul style="list-style-type: none"> How do you take account of unfunded protection (e.g. substitution, adjustment of loss estimates, etc) | <p>Joint default simulation.</p> |

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| | <ul style="list-style-type: none"> How do you take account of correlation between the credit quality of the protection provider and events (systemic, idiosyncratic) giving rise to or arising from the default of the counterparty (e.g. the need to realise a large amount of collateral in a short space of time) | <p>Automatically within our multi risk factor model within our credit portfolio model.</p> |
| | <ul style="list-style-type: none"> What policies do you have on who you will recognise as a credit protection provider (e.g. guarantor)? | |
| | <p>In relation to both forms of credit protection do you take account of any legal risk associated with credit risk mitigants? If so, how?’</p> | <p>From risk management point of view:</p> <p>Trading (Counterparty and Issuer Risk positions):</p> <ul style="list-style-type: none"> The availability of netting agreements is taken into account within the simulation of expected future exposure. Existing agreements, where the delivery of collateral in case of rising exposures is part of, are simulated separately. The focus on this simulation is explicitly on the margining process, depending on predefined thresholds. Synthetic bond positions are created to cover bought or sold protection from credit derivatives. The off-set between long and short bond positions is defined within a separate policy. Counterparty Risk against the protection seller (guarantor) is reflected as a separate position. The correlation between issuer and guarantor is reflected within the internal credit portfolio model. <p>Loans:</p> <ul style="list-style-type: none"> Recovery values for collateral (depending on collateral type) and guarantees (depending on the guarantor’s rating) are used within the calculation of LGD values. Therefore no correlation between obligor and guarantor is taken into account. |

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| | | <p>From regulatory point of view:</p> <ul style="list-style-type: none"> • With regard to the Large Exposure Regime there are five main types of credit risk mitigation used: <ul style="list-style-type: none"> a) pledging of cash collateral (pledge has to be equivalent to German Verpfändung) b) use of close-out netting agreements for derivative business c) credit derivatives (CDS in the trading book, CLN in trading and banking book) d) pledging of securities (applying the regulatory haircuts) • The close-out netting is used wherever a regulatory acceptable netting agreement exists. The collaterals under points a,c and d are used on a case-by-case basis in order to ensure that we comply with the Large Exposure Upper Limits acc. to §§ 13a,b KWG. |
| | <p>Indirect Concentration Risk:</p> | |
| <p>14.</p> | <p>For your internal risk measurement and management purposes how do you deal with the issue of 'indirect concentration risk' – that is single name or other concentration risk arising in respect of indirect exposures to the issuers of collateral or the providers of unfunded credit protection?</p> | <p>Banks have separate approaches to the measurement and management of 'indirect concentration risk':</p> <ul style="list-style-type: none"> • The credit risk review reflects these as "below the line" risk, which is subject to a separate level of credit authority (similar to e.g. settlement risk). Economic Capital is calculated for basis risk of hedges and credit default swap protection sellers but we do not yet aggregate indirect guarantee exposure to the EAD of the underwriter for technical reasons. • Due to the low risk (double default) this risk will not be addressed. • As far as indirect exposures occur from derivatives (for example counterparty risk in CDS) they are part of the concentration risk measurement. Apart from this indirect exposures are not part of the concentration risk measurement. |

Governance and reporting:

15. Please describe your internal governance and reporting policies and procedures relating to single name and other concentration risk. In relation to this aspect you might address:

- Your governance structure for setting, amending, and dealing with breaches of limits? Are limits hard or soft?

Banks use a variety of internal governance and reporting policies:

- In principal credit risk management and controlling is based on extensive internal organisational and procedural guidance. Hard limits exist as well as soft limits (only recommendations for the desirable structure of a portfolio; closer monitoring and implementation of action plan / measurements).
 - Management competencies for new lending decisions depend on creditworthiness and loan size. Reporting requirements defined by MaRisk are being covered by regular reports addressed to the Board and the Supervisory Board quarterly. The reports cover:
 - a. Clients exceeding a certain Risk Capital threshold;
 - b. New lending business, incl. largest new loans;
 - c. Portfolio concentration analysis by size class, maturity, region and sectors in case of significant changes occurred since the last report;
 - d. Every industry sector is being analysed at least once a year by sector-specialists, including largest loans, concentration by region, size class, maturity.
- .Sectoral and geographical limits will be proposed by a limit committee and approved by senior management (board of directors). The limit committee consists of representatives of the operative market units, risk management, treasury and risk controlling. The limits will be controlled by risk controlling; the reaching of limits will be reported to the top management regularly.
- .Key monitoring tool for large loan purposes is the monthly large loan report which covers all counterparty groups where regulatory exposure

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| | | <p>approaches or exceeds the large loan threshold of 10% of our capital – reported to regulator quarterly. Re limit setting & amending see answer 11. Breaches of individual credit limits are monitored by EDP systems and flagged to the responsible credit officer on a daily basis, who then acts accordingly.</p> |
| | <ul style="list-style-type: none"> • What factors influence monitoring frequency? | <p>Frequency is mostly influenced by volatility, size and reaching of limits. However, the question was often considered too broad to give a precise answer.</p> |
| | <ul style="list-style-type: none"> • What information and reports are provided to senior management and how often? Why did you select that information as having significance? What elements of risk is senior management monitoring? | <p>Here also a variety of policies exists:</p> <ul style="list-style-type: none"> • The large loan report is distributed to senior CRM management monthly to help in monitoring of concentration risk. Nonetheless, key concentration risk monitoring happens on a per-counterparty basis. • Degree of detailed information and frequency depends on the particular case. There is no general rule for the reporting to the top management (apart from legal requirements and relevance). Often special cases will be reported on an ad-hoc basis. • Monthly reports including new lending business, portfolio breakdowns by industry size class, maturity, industry sector, and region. Detailed analysis on a quarterly basis. Detailed industry sector reports including single name, regional, size class and maturity concentrations at least once a year for each industry sector. Ad-hoc reports in case of significant changes/special events. • If limits will be exceeded this will be reported immediately to the top management and the operative units. |
| | <ul style="list-style-type: none"> • Any other aspects of your concentration risk governance structure not covered above. | <p>Furthermore, an at least annual review of concentration risk is performed on a per-industry basis, combining industry and risk portfolio review with a</p> |

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| | | review of our largest counterparties in each industry and the determination of an industry risk appetite. This review results in a per-industry strategy for the following year, reviewed and approved by a senior risk committee. |
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