

SECTION V: COMPLEX FINANCIAL PRODUCTS — RISK MANAGEMENT, RISK DISTRIBUTION AND TRANSPARENCY

A. Overview

Over the relatively short period since the publication of the CRMPG I report, there has been a further explosion of financial innovation. As detailed in Appendices A and B, this process has been driven by a number of forces, including the “search for yield” and the rapid further evolution of risk mitigation techniques. One result of the process has been a surge in the creation of new and ever more complex financial instruments. These new products, which include credit and equity derivatives and structured transactions, have introduced greater complexity to the operational, risk measurement and risk management practices of financial intermediaries and their counterparties in the wholesale marketplace. The new products also have added complexity to the financial statements of both end-users and financial intermediaries, thereby creating challenges for understanding the nature and distribution of financial risks.

This section makes observations about the impact of product innovation since the late 1990s on firms’ operations, risk disciplines and transparency, and provides a set of Guiding Principles designed to more fully address those issues. It is directed at the wholesale institutional marketplace and encompasses bilateral responsibilities between counterparties transacting in such products. Section VI: Emerging Issues of this Report provides additional guidance related to the sale of complex products to retail investors either directly or indirectly.

The Policy Group has analyzed developments in three product classes in order to gain insight into the impact that product innovation since the CRMPG I report has had on the operational and risk management issues raised in that report. The three classes reviewed are: credit derivatives, structured credit products and equity derivatives. The Policy Group chose these classes because of their rapid growth over the last several years and their relative complexity, and because they provide valuable illustrations of how different market segments are interconnected. In choosing these three instruments, the Policy Group recognizes that a number of other relatively new instruments present similar features, including exotic interest

rate swaps, commodities derivatives and derivatives related to commercial mortgages. Thus, while the Policy Group chose for practical reasons to focus only on the three instrument classes discussed in Appendix A, the observations below could be applied to a broader family of products as well. Appendix A, which should be read as an essential part of this Report, reviews each class along the following dimensions:

- Instrument description and market developments
- Forces driving market activity
- Long and short users of the instruments
- Risk management issues

To varying degrees, these new products tend to incorporate leverage. Credit characteristics, duration and optionality are among the factors that will influence the extent of leverage associated with these products and therefore the potential for non-linear changes in their value in response to shocks. Accordingly, Appendix A begins with a summary of the CRMPG I analysis of leverage and provides an introduction to leverage as it relates to the instrument reviews. Appendix A also includes a series of charts for sample structured credit and equity derivative products that illustrate the sensitivity of their prices to key input variables. The Policy Group also commends the *Joint Forum Report on Credit Risk Transfer* of October 2004 (Joint Forum Report), which provides valuable explanations of the mechanics of credit derivatives and certain structured credit products, examples of how the value of the products might change in response to changes in key parameters and discussion of the risk management implications.

Each instrument review is highly informative in its own right, providing detail on how instruments work, the motivations for their use and the attendant risks. The Policy Group has determined that its analysis of these new products leads to four overriding conclusions as follows:

- 1. First, recent product innovation tends to add complication to firms' operating environments and can potentially raise issues related to reputational risk as well as financial risk.**

The operating environment associated with the life cycle of complex financial products is complicated for many reasons, but at least two main reasons stand

out. First, certain transactions can be hard to understand in terms of their cash flows or payout features, making the assessment of their current and potential values difficult. In structured credit transactions, for example, an investor can gain exposure to the performance of a single asset or pool of assets by investing in contracts with payout terms linked to the performance of the underlying assets or in tranches which prioritize the returns on reference assets across different classes of investors. The payout terms in these investments are analogous in some cases to the sale of options with the attendant risk features of those instruments. CDOs of CDOs (known as CDO-squared) are examples of a highly complex product referenced in Appendix A that can expose an investor to a quick accumulation of losses, depending on where they are in the subordination of the structure. In a Target Annual Review Note (TARN), an equity derivative product explained in Appendix A, the price return on any stock in the basket will affect not only the coupon received but might also affect the maturity of the investment.

The potential issues for intermediaries and their counterparties in understanding certain new products pose challenges for intermediaries in managing their relationships with those counterparties. Should the transaction's performance diverge from a counterparty's understanding or expectations, a financial intermediary could be exposed to a greater degree of reputational risk. This in turn has implications for how financial intermediaries review transactions for client suitability and reputational risk, document the transactions and communicate with counterparties. These considerations are addressed in those Guiding Principles in Section B below that relate to pre-trade activity, trade execution and post-trade processes.

Second, recent product innovation can raise challenges for the systems and technology infrastructure supporting front office, back office, finance and risk operations. As illustrated in the instrument reviews in Appendix A, financial intermediaries engaged in complex credit transactions, for example, may have to be able to track the performance of and modify the composition of different asset pools; manage the payouts associated with multiple tranche structures; and incorporate transactions accurately in their market risk, credit risk, accounting and internal and regulatory capital measurement systems. A major challenge in this regard is ensuring that the relevant systems can both help the firm understand the ongoing economics of any one transaction as a whole, including hedges and any risk mitigants such as collateral, while also properly capturing

the underlying risk factors for possible aggregation with risks emanating from other transactions. These challenges can be exacerbated when transactions have multiple legs (e.g., back-to-back swaps or swaps combined with guarantees) or involve multiple legal entities.

The challenges to firms' operational readiness for complex products place particular importance on the robustness of governance arrangements associated with the management and monitoring of such transactions. The Guiding Principles on governance in Section B below are intended to help firms ensure that they are prepared for the operational intensity associated with this activity.

2. Second, the risks associated with certain new products can be highly complex, posing challenges for risk measurement and pricing.

The underlying variables and structures associated with recent product innovation introduce complexity in risk measurement and pricing. Common features of complex credit products, for example, illustrate this point. Among other factors, estimates of default probabilities, credit spread paths, correlation⁴ assumptions, the impact of collateral and recovery rate uncertainty contribute to a high degree of complexity in modeling the current and potential future value of these instruments. The risk of sudden jumps in credit quality (including to jumps to default) is present in virtually all traded credit products and is difficult to capture in risk modeling. Complex credit products are particularly sensitive to default correlation, and although a number of modeling approaches can be used to address this, an industry standard has not yet emerged.

Measuring the risk of innovative equity derivatives instruments also can be complex in light of the key variables in the trades. For example, in variance swaps, volatility⁵ itself is the key variable driving the return and risk. Investors trade the spread between index and single stock return variance, a spread that is closely linked to the correlation of stock returns. As discussed above, this has led in turn to the development of correlation swaps, which allow investors to trade the correlation of equity returns. Another example, described in Appendix A, is

⁴ Correlation measures the tendency for two variables to move together. It shows how the variability in one quantity is related to the variability in another. Positive correlation implies that an increase in one variable will typically be associated with an increase in the other variable. Negative correlation implies the opposite.

⁵ Volatility measures the extent to which a variable tends to change in value. In statistical terms, it is the standard deviation of a variable as a percentage of the mean.

the Constant Proportion Portfolio Insurance (CPPI), in which the amount invested in a risky asset (e.g., equities) depends on its performance.

Other considerations contribute to the complexity of risk measurement. For example, proxies are often used where direct prices are not available, potentially creating basis risks for the firm that may be hard to capture. Risk management paradigms, including pricing and risk measurement models, routinely presume markets are liquid such that transactions can be hedged or unwound without drastically changing market prices. As discussed elsewhere in this Report, assumptions about asset liquidity do not always hold, exacerbating price movements and potentially raising significant issues related to a firm's funding liquidity.

To the extent complicated risk modeling is required for these types of instruments, pricing and valuation will be more opaque and harder to understand. The complexity associated with measuring financial risk demands that firms routinely challenge core assumptions. Complexity in risk measurement also should raise questions for financial intermediaries and investors about whether they are being adequately compensated for the risks they are incurring. If market participants have difficulty measuring the risks then it is possible that they also will have difficulty making sensible risk/return decisions. Potential uncertainty regarding risk/return tradeoffs as represented through modeling techniques necessitates the overlay of seasoned judgment as discussed in the over-riding Guiding Principle in Section B below. Such uncertainty also indicates opportunities for improving modeling and stress testing practices, which are addressed in the Guiding Principles and Recommendations on risk management and monitoring.

3. Third, managing the risks of many instruments can be more difficult in light of the underlying assets, structures and the vagaries of complex models used in the design and valuation of these instruments.

Even if issuers of these products have robust risk measurement capabilities, the management of the associated risks can be difficult. As the equity derivatives instrument review points out, an important reason is that some key risks are not easily recycled in the financial markets. Examples of these risks include the following:

- Short correlation in equity due to the systematic sale of index options as hedges of long single stock options.
- Structural sensitivity to gapping risk in hedge fund price returns.
- Impairment of hedging strategies in hedge fund linked structures due to constraints on the purchase and sale of hedge fund shares.

Financial intermediaries in the complex credit market also face risk management challenges, including:

- Residual risks (including gamma and correlation) of capital structures that are not fully distributed.
- Substitution risk of defaulted or withdrawn assets.
- Ratings triggers which can result in forced selling by investors.

The dynamic hedging required of single-tranche CDOs, created in a case where the full capital structure cannot be distributed, provides a useful illustration of some of these challenges. These products require intermediaries to sell protection on the names in the reference portfolio in an amount that offsets spread movements in those names. As market credit spreads change, intermediaries must adjust how much protection they sell. This is a continuous process that requires careful attention to the correlation of spreads.

As a general matter, correlation adds a new, difficult dimension to risk management of structured credit products. To manage this risk an intermediary could, for example, complete the capital structure or hedge with more standard tranches. These approaches pose challenges, however, because they might embed a variety of mismatches (e.g., maturity, bespoke versus standard). As a result, the intermediary may be exposed to higher order risks.

The prospect of investors facing similar risk exposures is central to the analytical framework for leverage in CRMPG I. Given that structured credit remains largely a long-only market, investors are likely to have very similar risk exposures. Overlap in the composition of assets is an issue for all CDOs, especially CDO-squared, and can be as high as 50 – 70%. To the extent leveraged investors are in a “crowded trade,” they may be compelled to try to liquidate or immunize positions at or about the same time in the event of a firm-specific or adverse

market event, exacerbating price movements, which can in turn magnify the impact of the event with potentially destabilizing effects. The probability that an investor in a synthetic or structured product will feel compelled to liquidate or immunize a position will be partly a function of the investor's subordination position. Equity investors will be focused particularly on idiosyncratic events while investors in senior tranches will be driven by systematic or correlated events.

Against this background, focus on the judgmental aspects of risk management and continuous efforts to measure risk as thoroughly as possible are essential. The Guiding Principles in Section B below that relate to the importance of judgment and model risk were developed with this in mind.

4. Fourth, the risk profiles of financial intermediaries and end-users are less transparent in light of the observations above, making investment analysis, counterparty risk assessment and crisis management more difficult.

The complexity of financial risks intrinsic to recent product innovations has made it more difficult to understand the risk profiles of firms and therefore of the financial system as a whole. This is due in large part to the multifarious interactions of key variables that affect the value of firms' trading and investment portfolios. Risk measures that are commonly shared or disclosed today are very useful but have well-known limitations. Value-at-Risk (VaR) measures, for example, have known limitations because they tend to show the potential for loss under normal market conditions over short-term horizons. Moreover, VaR measures are often shared or disclosed at a relatively high level of aggregation, making it hard to understand a firm's sensitivity to major shifts in underlying risk factors. The utility of such measures in public filings is further limited because they tend to be stale given the time lag between dates on which they are calculated and the actual date of publication. While time series data for individual firms provide useful perspectives on risk appetite over time, the fact remains that VaR-type measures do not capture so-called "tail events" and can change very rapidly over short periods of time.

CRMPG I highlighted three levels of information transparency that are important to the smooth functioning of financial markets: bilateral sharing of information between counterparties, disclosure of information in public filings and reporting by firms to their regulators and rating agencies. The Policy Group still believes

— as it did in CRMPG I in 1999 — that the area where the most progress can and should be made is in the sharing of bilateral information between counterparties. Accordingly, Section III of this Report is focused on enhancements to the 1999 recommendations in CRMPG I in this area. The Policy Group also believes there are opportunities at hand whereby financial intermediaries — especially large and complex intermediaries — can take steps to foster the timely and periodic review of information with their primary regulators. Finally, the Policy Group believes there are only limited opportunities to make improvements in quantitative public disclosures because the financial statements and public filings of financial intermediaries are already compound and complex. However, the Policy Group also believes there are opportunities to further upgrade and broaden qualitative disclosures as discussed in the Guiding Principles.

B. Guiding Principles and Recommendations

In the context of the four areas of analysis discussed above as they relate to today's complex financial environment, the Policy Group has framed a series of Guiding Principles and Recommendations which it believes will materially enhance risk management and risk mitigation efforts of both financial intermediaries and users of complex financial instruments. In considering such Guiding Principles, the Policy Group urges that such Principles be seen as an integrated package of initiatives in that the effectiveness of any one such Principle or Recommendation is tightly linked to the collective effectiveness of the Principles and Recommendations as a group. With that in mind, the Guiding Principles and Recommendations are presented in the following groupings.

1. Governance
2. Financial Intermediary/Client Relationship
3. Risk Management and Monitoring
4. Enhanced Transparency

Before presenting these Guiding Principles and Recommendations, the Policy Group strongly believes that there is a single over-riding Guiding Principle which must be at the very center of efforts to better manage financial and reputational risk in the current and prospective environment, as follows:

23. Over-Riding Guiding Principle (Category I):

Senior management and business managers at financial intermediaries must rely first and foremost on sound judgment based on experience and the fundamentals of managing risk.

It is a core belief of Policy Group members that this Guiding Principle provides the foundation for strong risk management practices. In this regard, senior management and all relevant business managers at firms engaging in complex transactions should ensure that they: (1) understand the essential risk elements of the instruments their firms are buying and selling; (2) implement a well-developed process to ensure that reputational risks are adequately addressed and fit into the relationship framework being sought between firms and their clients; (3) understand the nature of the risk associated with the positions their businesses have taken; (4) understand the limitations of the pricing and risk models applicable to the instruments; (5) adjust risks tolerances and associated limits based on those limitations; (6) receive information that allows them to determine whether the risk positions are within agreed upon limits; and (7) hold business line personnel accountable for the financial, risk and operational performance of the activity.

1. Governance Related Guiding Principles

24. Guiding Principle (Category I)

New products and major variants of existing products should be subject to a systematic review and approval process by a senior level committee or similar group. The new product approval process should, at a minimum, have the following features:

- Effective internal communication as to the classes of activity that are subject to the review process.
- The involvement of independent control personnel.
- Reasonable expectations that the necessary operational and related infrastructure to support the new product are in place.
 - To the extent that such expectations are not being realized, management should be prepared to limit or curtail such business until the support infrastructure is well established.

- Adequate training of sales and related personnel.
- Rigorous documentation.

25. Guiding Principle (Category I)

Individual transactions that entail unique reputational issues should also be subject to an appropriate framework of escalation to senior management or committee review particularly when they entail questions regarding accounting, tax, regulatory or business intent or purpose on the part of the client. The transaction review process should, at a minimum, have the following features:

- Effective internal communication as to the classes of activity that are subject to the review process.
- The involvement of independent control personnel.
- Adequate training of sales and related personnel.
- Rigorous documentation.

26. Guiding Principle (Category I)

While new product and select individual transactions approval processes must involve both business and independent control personnel, it is an inherent responsibility of senior management to ensure that the independent control personnel are truly independent.

27. Guiding Principle (Category I)

At least annually, the effectiveness of the new product and unique transactional approval process should be reviewed by the highest level of management.

2. Intermediary/Client Relationship

Complex over-the-counter transactions in the wholesale market between a financial intermediary and an end-user require clarity with respect to the nature of the relationship between the parties and the attendant obligations each party may owe the other in connection with these transactions. Since these complex transactions will often remain outstanding for a significant period of time, it is in the interests of both parties to have a firm and clear understanding of the

principles that should guide the parties over the course of their relationship. The following principles should be considered in the context of each trading relationship in the wholesale market involving complex over-the-counter transactions between a financial intermediary and a sophisticated counterparty. These principles are intended to promote high standards of customer service and reputational as well as financial risk management. They are not intended to alter the arm's-length nature of the parties' relationship or to articulate legal standards. Of course, these principles are intended to complement, and not substitute for, compliance by financial intermediaries with their express contractual undertakings and with applicable legal and regulatory requirements relating to the offer or sale of such products.

(a) Pre-Trade

28. *Guiding Principle (Category I)*

- Assess Client Sophistication and Experience – The financial intermediary should make reasonable efforts to determine the level of experience and sophistication a potential counterparty has in trading complex products to enable the financial intermediary to tailor its communications regarding the terms of, and the risks and opportunities associated with, a proposed transaction. As part of the financial intermediary's review of the potential counterparty's sophistication and experience, the financial intermediary should give careful consideration to whether the potential counterparty understands the arm's-length nature of the relationship and should take reasonable steps to reduce the risk of misunderstanding by clarifying the arm's-length nature of the relationship in written or other communication with the potential counterparty.
 - *Role of Financial Intermediary:* The financial intermediary is not, unless otherwise expressly agreed, the potential counterparty's advisor and the financial intermediary will execute a complex transaction strictly on an arm's-length basis. If the potential counterparty expects the financial intermediary to undertake any heightened responsibilities, it is the counterparty's responsibility to ensure that those expectations are clearly communicated and agreed in the transactional documentation.

- *Non-Reliance*: Because each party must independently evaluate whether the risks and benefits of a complex transaction are appropriate for it, the potential counterparty has the obligation to ensure that it has obtained any information or clarification it deems necessary to evaluate the appropriateness of the transaction in light of its own circumstances and objectives.

29. Guiding Principle (Category I)

- Term Sheets: Although it is standard market practice to reflect the terms of a complex transaction in a written confirmation exchanged by the parties following execution of the transaction, financial intermediaries have different practices with respect to furnishing potential counterparties with term sheets or other documentation describing transaction terms, including any early termination provisions, prior to execution of the transaction. This is particularly important with complex products. Financial intermediaries should provide such documentation in all situations where the particular complexities of the transaction create a risk of misunderstanding regarding the operative terms of the transaction.

30. Guiding Principle (Category I)

- Disclosure: The financial intermediary should ensure that any written materials supplied to the potential counterparty relating to the risks of a proposed complex transaction fairly present the material risks to the potential counterparty. The form of disclosure, which may consist of scenario-based analysis or other appropriate text or metric descriptive of the risk, should be clear and accurate.
 - *Identifying Material Risks*: Both the financial intermediary and the counterparty should consider the material risks associated with each complex transaction and the financial intermediary should disclose the material risks to the counterparty upon counterparty request or if the financial intermediary believes the potential counterparty may not understand these risks. For example, a financial intermediary may conclude, under appropriate circumstances, that it should discuss the potential adverse impact of the financial intermediary's ordinary course hedging, market-making and proprietary activities on a

complex transaction's value, or the exercise by the financial intermediary of early termination rights.

- *Maintenance of Position:* Both parties to a complex transaction should consider and, as appropriate, discuss at the start of their relationship any significant issues relating to the maintenance of open positions, such as, how a complex transaction will be recorded, valued and margined. The financial intermediary should consider whether potential counterparties understand that valuation of a complex transaction is a function of the inputs and the proprietary financial models used by financial intermediaries and, consequently, that valuations determined by one financial intermediary may not be consistent with those of another or, to the extent capable of being modeled by the potential counterparty, those of the potential counterparty.

(b) Trade Execution

31. *Guiding Principle (Category I)*

- Trade Review: The financial intermediary should review with the potential counterparty the material terms of a complex transaction immediately prior to execution. The financial intermediary may satisfy this obligation either through explicit recitation of the key transaction terms, or by referring to a transaction summary or other document (describing the material terms of the transaction) previously provided to the counterparty and obtaining affirmation of the material terms from the potential counterparty.

32. *Guiding Principle (Category I)*

- Confirmation: Both financial intermediary and counterparty must make reasonable efforts to confirm the execution of a complex transaction in a timely manner, in accordance with Recommendation 12 in Section IV of this Report.
 - *Notice of Delay:* If the financial intermediary anticipates delay in the creation of an appropriate confirmation reflecting the terms of a complex trade, the counterparty should be promptly notified of the expected delay.

- *Trade Recaps*: Parties frequently exchange evidence of their agreement (for example, signed term sheets or electronic messages) prior to the execution of a confirmation. If the financial intermediary intends that this information will not serve as a binding confirmation of the transaction terms, the financial intermediary should disclose this fact to the counterparty before or at the time this information is provided. Even though this information may not constitute a binding confirmation and may have been provided by the financial intermediary only for informational purposes, each party should take reasonable steps to review the information for accuracy and completeness and should promptly notify the other party of any error or discrepancy it identifies.

(c) Post-Trade

33. *Guiding Principle (Category I)*

- Valuations: If the counterparty requests a valuation of a complex transaction executed with the financial intermediary, the financial intermediary should have a clear understanding of the counterparty's intended use of the valuation so provided.
 - *Market Levels and Inputs*: It is acceptable market practice for a financial intermediary's sales and trading personnel to provide their sophisticated counterparties with general market levels or "indications," including inputs and variables that may be used by the counterparty to calculate a value for a complex transaction. Additionally, if a counterparty requests a price or level for purposes of unwinding a specific complex transaction, and the financial intermediary is willing to provide such price or level, it is appropriate for the financial intermediary's sales and trading personnel to furnish this information.
 - *Requests for Valuation*: If the counterparty wants to receive a valuation of a specific complex transaction from a financial intermediary, it should clearly communicate to the financial intermediary that it is requesting a specific transaction valuation and not other more general market information. A financial intermediary should have formal procedures and controls in place for processing

and responding to all valuation requests and, in addition, should have a unit independent of the financial intermediary's sales division prepare the valuation and provide it to the client in order to minimize any risk of conflict or appearance of impropriety.

- *Form of Valuation:* A valuation provided by a financial intermediary, whether based on market prices or financial models, should be in writing. Furthermore, the written valuation should clearly state the basis upon which the valuation is being provided.

34. Guiding Principle (Category I)

- Client Communication: Following execution of a complex transaction, the financial intermediary will often maintain communication with the counterparty in the interest of maintaining good client relations. As part of this communication, the financial intermediary, although under no legal obligation to do so, may wish to alert its counterparty to any observed market change that it determines may challenge the underlying assumptions or principal drivers that motivated the counterparty to establish the original position.

3. Risk Management and Monitoring

Guiding Principle 4 in Section III of this Report highlights independent model review and stress testing as important components of strong risk management practice. The financial instruments discussed in this section are highly dependent on models for pricing and risk measurement. As a result, the integrity of model construction and parameterization are critical to the risk/return profiles of firms using them. Model integrity also is central to mutual confidence between counterparties, particularly where models are used to derive client valuations. Therefore, for firms that actively use complex products, the robustness of model review and stress testing practices takes on even greater importance.

35. Recommendation (Category I)

CRMPG II recommends that financial intermediaries have a dedicated and fully independent group of professionals who are fully responsible for all aspects of model verification including final approval of all changes in model design and specification. The model verification group should determine:

- The scope and frequency of all model reviews.
- Standards for review of model assumptions and methodology.
- Model testing and release requirements.
- Documentation and inventory standards, including user guides, technical documentation, testing notes and source code.

36. Guiding Principle (Category I)

Firms should continue to invest in their risk measurement capabilities with a particular view towards making advances in areas of model uncertainty associated with new and complex products.

There are at least three areas where the Policy Group believes further enhancements may be warranted:

- Multi-period models for multi-name credit structures
- Treatment of implied correlation
- Treatment of long-dated cross-currency options

Firms at the leading edge of market practice regularly conduct scenario analyses and stress tests of their portfolios to gain insight into the impact of changes in market variables. In this regard, it is important to note that these analyses themselves have limitations that must be understood. These limitations include the following:

- Specific scenarios, such as historical ones, might not reflect changes to key parameters that will most adversely impact the value of the portfolio.
- Stress tests are often conducted at a high level of aggregation, potentially blunting the impact of changes to key assumptions.
- Infrastructure and data limitations can limit the ability to alter multiple parameters simultaneously, which can result in a misestimate of the potential risks.

In addition, Policy Group members have observed that scenario analyses or stress tests do not provide value to senior management or business

managers unless they are plausible. Moreover, they do not necessarily facilitate decision-making unless they incorporate a probabilistic assessment of the stress condition occurring. This is especially true when management might be trying to make decisions based on a comparison of different businesses' stress tests.

37. Recommendation (Category I)

CRMPG II recommends that to gain insight into the potential for value changes in their portfolios, firms should conduct stress tests that alter key input variables of the models they rely on for pricing and risk measurement of new and complex products. Such tests should be both plausible and meaningful for the relevant portfolios. Firms should understand the limitations of such tests and conduct specialized tests, as appropriate.

To improve the value of stress testing exercises, firms should consider the following:

- Asking business managers and senior management to clearly express loss tolerance levels.
- Identifying a range of scenarios that could produce losses for portfolios or businesses.
- Ranking the scenarios by level of potential adverse impact.
- Assessing relative probabilities for the scenarios.
- Based on this probabilistic assessment, comparing potential loss estimates to expressed tolerance levels.

38. Guiding Principle (Category I)

Once a financial intermediary has accumulated a material position in a complex product, it should require its desk to trade a portion of the risk in the market. Such a practice is a promising way to promote price discovery and to narrow the potential for divergence between theoretical, model-derived prices and market prices, particularly if firms have accumulated similar risk positions.

4. Enhanced Transparency

CRMPG I and Section III of this Report focus on the exchange of bilateral information as a means of enhancing transparency, which, in turn, will improve counterparty risk management practices. The Policy Group strongly believes that the suggested further measures to foster greater bilateral exchanges of information are central ingredients in improving information flow in the financial marketplace.

The Policy Group also believes there are clear opportunities to improve the effectiveness and timeliness of informal confidential exchanges of information between financial intermediaries — especially large and complex integrated intermediaries — and their primary regulators as outlined in Guiding Principle 39 below.

39. Guiding Principle (Categories I & III)

Where it is not already the practice, large and complex financial intermediaries should provide their primary supervisors with timely quantitative and qualitative risk-related information on a regular basis and be prepared to provide such information on an ad hoc basis when circumstances warrant.

- Such information should be provided on an informal and confidential basis so as to facilitate the flow of otherwise proprietary and trade-specific information, as needed.
- The responsibility for such informal exchanges of information should be vested with an appropriately senior official — typically the chief risk officer or his or her equivalent.
- Supervisory bodies should make every reasonable effort to accommodate this process by ensuring that appropriately senior supervisory personnel will be available to participate in such regular discussions of risk-related matters.

With regard to public disclosure, the Policy Group observes that it will be difficult to design additional quantitative measures specifically around more complex products that are (1) readily understandable to a cross-section of readers, (2) respectful of proprietary boundaries and comparable across firms

and (3) appropriately consistent with the extraordinary complexities and detail associated with hedging and other risk mitigation activities. While opportunities for enhanced quantitative disclosures will surely emerge over time, the Policy Group believes there are important opportunities to enhance qualitative disclosures in the short run as outlined in Guiding Principle 40 below.

40. Guiding Principle (Category I)

Consistent with the Policy Group's core principle concerning the importance of the judgmental aspects of risk management, firms should strive to enhance qualitative public disclosures around complex products.

Specifically, the Policy Group strongly urges that intermediaries take steps to incorporate the following in their public disclosures:

- Description of the roles the firm plays (e.g., market maker, structurer, distributor and investor).
- Discussion of how complex products are addressed in the firm's risk management framework, including:
 - The governance associated with complex transactions.
 - The nature of the limits associated with the transactions.
 - The extent to which the products are captured in reported measures of credit, market and liquidity risk, and related capital measures.
 - How the firm addresses the potential for losses in portfolio values associated with stressed market conditions.
 - Any special considerations in the areas of documentation and risk mitigation related to collateral practices and hedging.
 - How the products are valued for financial statement purposes.

In identifying these potential areas for qualitative public disclosure, the Policy Group recognizes that it would be a matter of firm preference whether to incorporate references to such products in the overall risk management discussion section or whether to develop a dedicated section.

