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An Analysis of the Coalition for Derivatives End-Users' Survey on Over-the-Counter Derivatives

Prepared For:

Coalition for Derivatives End-Users

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February 11, 2011

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I. Introduction

With the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), the over-the-counter ("OTC") derivatives market in the U.S. will come under greater regulatory scrutiny. Specifically, Title VII intends to impose a series of new regulations on transactions executed in the OTC derivatives market. Among other significant changes, the proposed regulations plan would subject Swap Dealers and Major Swap Participants to capital and margin requirements on cleared and non-cleared transactions. Although exemptions may apply for certain non-financial firms, there remains some ambiguity over the extent of these potential exemptions.

This memo reports the results from a recent survey conducted by the Business Roundtable, the U.S. Chamber of Commerce's Center for Capital Market Competiveness, Chatham Financial, and the National Association of Corporate Treasurers. This survey provides fresh data on the potential impacts of Dodd-Frank's OTC derivatives proposed regulations, and also acts as a follow-up to a previous survey conducted by the Business Roundtable on similar topics.

II. Survey Description

In response to the current debate on OTC derivatives regulation, a recent survey conducted by the Business Roundtable ("BRT"), the U.S. Chamber of Commerce's Center for Capital Market Competiveness ("U.S. Chamber"), Chatham Financial, and the National Association of Corporate Treasurers examined the usage of OTC derivatives to gauge the potential effects of Dodd-Frank. The derivatives survey was drawn from a sample of BRT and U.S. Chamber companies, and was in the field from November 3, 2010 until January 7, 2011. Of the 74 companies that participated in this survey, 72 firms reported the use of OTC derivatives, and 66 firms provided data on the notional amounts of their respective OTC derivatives exposure. Keybridge Research was asked to use the survey responses to conduct an analysis of the potential economic impacts of OTC derivatives regulations.[1]

III. Key Findings

- Nearly 61% of survey participants report that proposed regulations would have a moderate (28%) to significant (33%) impact on the level of working capital required to operate their business; 18% say the new rule would have minimal impact; and 18% of firms remain uncertain about the impacts of Dodd-Frank.
- Of the 74 survey respondents, 66 provided data on the notional amounts of their derivative exposure. For these companies, the total gross notional amount was $422.2 billion, or $6.4 billion per company (median: $730.0 million)
- For the 66 firms that provided detailed derivatives data, a 3% margin requirement, assuming no exemptions, would result in aggregate collateral of $12.7 billion. On average this would be equal to $191.9 million per firm, or roughly 1% of revenue.
- Extending the analysis to the S&P 500 companies, this analytical note estimates that a 3% margin requirement on OTC derivatives could be expected to reduce capital spending by

[1] Keybridge Research did not participate in the design, sampling, implementation, or gathering of responses for this survey.

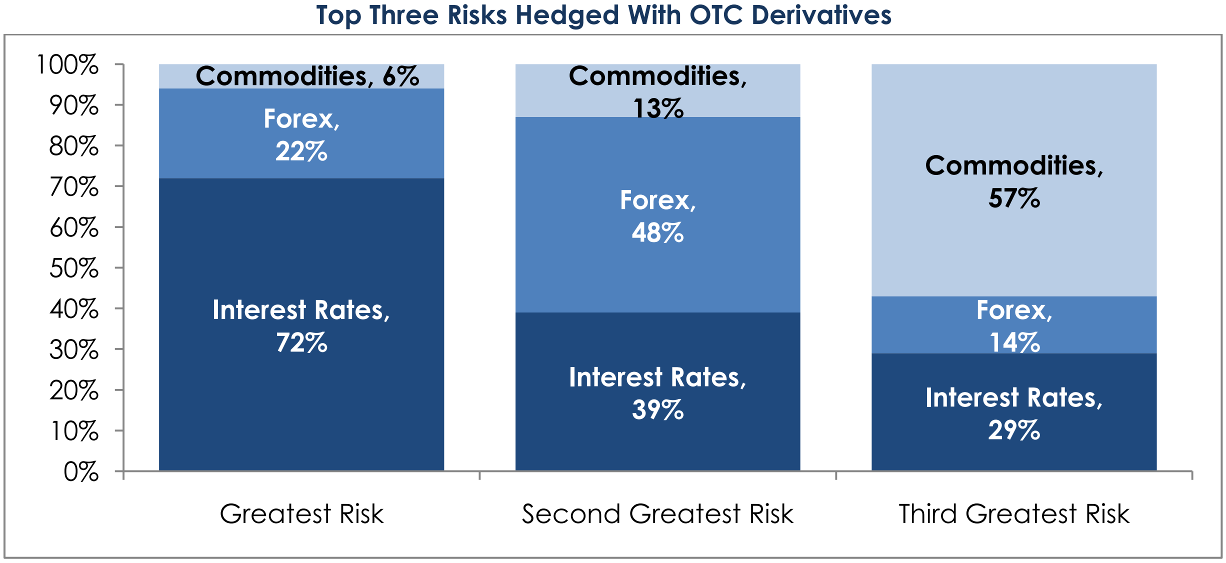
$5.1 to $6.7 billion per year, leading to a loss of 100,000 to 130,000 jobs, including both direct and indirect effects.

IV. Detailed Findings

4.1 Use of Derivatives

- 97% (72/74) of survey participants use derivatives. The responding companies represent $1.03 trillion in revenues (equivalent to roughly 8 percent of U.S. national GDP) and more than 2 million employees (as of 12/31/2010).
- 66 companies reported the amount of OTC derivatives exposure as of 9/30/2010 or at the end of the most recent quarter. The combined total *net* market value of outstanding OTC derivatives was $10.3 billion, and the total *notional* value was $422.2 billion. The median and mean OTC derivatives exposure were $730.0 million and $6.4 billion per company (notional value), respectively.
- 47 of the survey participants are non-financial firms—their combined total *net* market value of outstanding OTC derivatives was $6.3 billion as of 9/30/2010. The total *notional* value of OTC derivatives was $241.1 billion, and the median notional exposure was $1.2 billion.
- The median ratio of OTC derivatives (notional value) to total assets was 14.9% for all companies, and 17.1% for non-financial firms.
- Firms report using almost two thirds (62%) of their derivatives to manage interest rate risk; 27% to hedge foreign currencies; and 16% to hedge commodity prices.
- In line with this portfolio breakdown, firms report that interest rate exposure (72%) is the greatest risk hedged with OTC derivatives, followed by foreign currency exposure (22%) and commodity price risk (6%).
- 41% of firms reported that derivatives usage perfectly matches the underlying risks associated with hedging price movements of foreign currencies, interest rates, and commodities. Almost half (48%) say that derivatives "mostly" (51-99% of the time) match these risks, and 11% of firms perfectly hedge their underlying risk less than half the time.

Top Three Risks Hedged With OTC Derivatives



4.2 Derivatives Trading Operations

- A majority of firms (71%) transact with 10 counterparties or less. 43% of firms transact with 5 or fewer counterparties, 28% of firms transact with 6-10 counterparties, 15% transact with 11-20 counterparties, 6% transact with 21-40 counterparties, 8% transact with more than 40 counterparties.
- Almost one quarter of firms (24%) report going through an affiliate to execute swaps, while 76% of firms do not execute swaps through an affiliate.
- 28% of firms have an entity within their respective companies that engages in swaps and is predominantly financial in nature; 72% of firms do not have such an entity.

4.3 Collateral & Margin Requirements

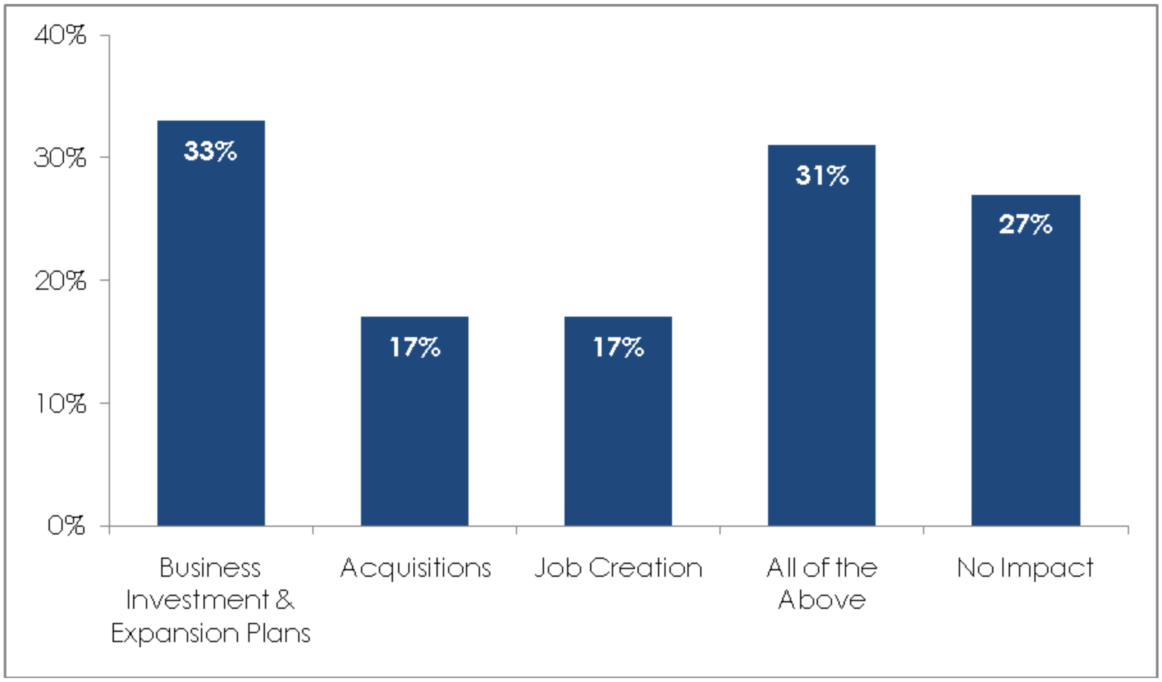
- A majority of firms (61%) have credit support annexes in place that would require collateral posting in certain circumstances, while 39% do not have annexes requiring collateral posting.
- For financial firms that have made collateral arrangements, 88% of firms are bound by bilateral requirements and 13% by unilateral requirements. For nonfinancial firms, 59% and 41% have agreed to bilateral and unilateral requirements, respectively.
- As of the most recent quarter, firms posted a total of $1.6 billion in collateral. For firms that reported an amount greater than zero, the average posting was $67.2 million.
- To reserve adequate amounts of cash and committed credit to meet margin requirements, firms must be able to estimate the possible mark-to-market movements over the life of derivative instruments. Currently, only 30% of firms are doing this or in the process of doing it.
- 24% of firms have systems in place that could do real-time mark-to-market calculations of their derivatives portfolio (independent of calculations done by counterparties). 68% of firms do not have systems in place to do these calculations, and 9% of respondents are unsure.

4.4 Potential Impact of New Regulations

- In general, roughly 61% of survey participants report that the proposed regulations would have a moderate (28%) to significant (33%) impact on the level of working capital required to operate their businesses; 18% say the new rule would have minimal impact; and 18% of firms remain uncertain about the legislations' potential impacts.
- Among the three most concerning derivatives-related regulatory requirements, 56% of firms are concerned with margin requirements, followed by central clearing (24%) and capital (24%) requirements.
- Most respondents (91%) said that transactions costs associated with trading would likely increase due to higher margin and capital costs placed on counterparties. In response to higher costs, 68% of firms would likely reduce hedging, while less than a third of firms would likely continue their current level of hedging. Likewise, three out of four firms (77%) said they would consider alternative means of managing risk, 41% would increase pricing to end customers, and 23% would shift risk to customers or suppliers.
- As for specific impacts of new regulations on business activities, 31% of firms report that new

capital requirements would have a combined impact on business investment and expansion plans, acquisitions, and job creation activities. Another 33% said that the primary impact of new derivatives regulations would be their effect on business investment and expansion plans. Only 27% of firms report no anticipated impacts of new derivatives regulations—of these firms, 53% had little or no reported derivative exposure.

Impact of New Capital Requirements on Business Activities



Note: Percentages do not total to 100%, because survey participants were permitted to provide more than one response to this question. For example, a single company could report that Acquisitions and Job Creation would both be impacted by new derivatives regulations.

- One possible response to Dodd-Frank would be a shift in hedging activities to foreign jurisdictions. 46% of respondents indicated that they would evaluate the ability to transact in foreign jurisdictions as a result of OTC restrictions and regulations in the U.S.
- 40% of firms are concerned that reporting requirements in Title VII will facilitate "front running", thus raising the costs associated with hedging activities, while 47% of firms are uncertain about these impacts. 13% do not think Title VII will increase the risk of front running.
- Overall, many firms are uncertain about whether and how they will be subjected to different requirements. For instance, nearly half of firms are unsure whether central clearing and trading requirements would apply to them (44%) or whether they will be required to post collateral for hedges that have not been centrally cleared (49%).
- This uncertainty explains why 50% of respondents are not sure whether they will disclose the impact of Dodd-Frank on their next financial statement.

V. Financial & Economic Implications

Regulations requiring 3% cash collateral on OTC derivatives could result in a significant diversion of cash flow from normal operating and investment activities.[2] The analysis performed by Keybridge Research, below, provides a rough estimate of the potential impact of a 3% margin requirement on all OTC derivatives to the survey respondents and to constituents of the S&P 500 alone. The analysis does not include an estimate of the potential impact of requirements to post variation margin. The analysis assumes no exclusions from the margin requirement, and does not account for any other economic or policy actions (e.g., tax legislation that would allow for 100% write-off of capital spending in 2011).

The analysis follows the following methodology:

(1) Calculate the median ratio of [notional value of] OTC derivatives-to-assets for survey respondents;

(2) Use this ratio to estimate the notional values for S&P 500 companies;

(3) Assume a 3% margin requirement paid in cash;

(4) Use respected academic literature to estimate the likely reduction in fixed capital spending as the result of the reduced cash flow.

Following the above methodology, the analysis indicates that a 3% margin requirement on OTC derivatives could result in a significant one-time reduction in cash balances and an estimated 1.5% decrease in capital investment among S&P 500 companies.

- As of 9/30/2010, the median ratio of OTC derivatives (notional value) to total assets for survey participants was 14.9%.
    - This ratio, based on 66 responses, was then applied to all S&P 500 companies.
    - The total estimated notional value of OTC derivatives for S&P 500 companies would be $3,334.9 billion.
    - A 3% margin requirement would result in a one-time reduction in cash flow of $100.05 billion for S&P 500 companies. This is equal to about 7.4%[3] of the S&P 500 constituents' combined cash flow for 2010.
- Academic literature finds that reductions in corporate cash flow lead to reductions in business fixed investment (capital spending). A leading academic study finds that a 1%

[2] The 3% initial margin figure is illustrative only and is not a prediction of what regulators may impose, directly or indirectly. The Coalition for Derivatives End-Users believes that the Dodd-Frank Act does not provide regulators with the authority to impose margin on end-users. While CFTC Chairman Gensler has indicated that his intent is not to impose margin directly on non-financial end-users, the Coalition remains concerned that the CFTC and/or prudential regulators (a) might attempt to impose margin indirectly on end-users, through counterparties or otherwise, (b) have not expressed agreement with the Coalition position on authority to impose margin (and, hence, could attempt to impose margin on non-financial end-users in the future), and (c) might attempt to impose margin directly on financial end-users.

[3] As of January 24, 2011, Bloomberg reports S&P 500 cash flow per share as 148.34 for December 31, 2010. With an approximate multiplier of 9.087, this results in an aggregate cash flow of $1,348 billion.

reduction in cash flow/lagged net capital (CF/LNC) leads to a 0.06 to 0.07 reduction in the ratio of capital expenditures to lagged net capital (CX/LNC).[4]

- For the S&P 500, the $100.05 billion decline in cash flow would reduce in the ratio of cash flow to lagged net capital (CF/LNC) by about 0.44%.
- The resulting decline in the ratio of capital spending to lagged net capital (CX/LNC) would average approximately -0.033 to -0.026.
- This means that in aggregate S&P 500 companies would likely respond to the imposition of margin requirements on OTC derivatives by reducing capital spending from 1.96% of net capital to about 1.93% of net capital—or approximately $5.1 billion to $6.7 billion (about 1.5% of total capital spending for the S&P 500).
- Based on an analysis of the jobs multipliers produced by the U.S. Department of Commerce's Bureau of Economic Analysis, every $1 billion in capital spending creates approximately 19,643 jobs including both direct and indirect effects.[5] Therefore, a 3% OTC derivative margin requirement imposed on derivatives trading by S&P 500 firms might be expected to eliminate approximately 100,000 to 130,000 jobs economy wide.

[4] Hovakimian, Armen G. and Hovakimian, Gayané, Cash Flow Sensitivity of Investment (November 23, 2005). Available at SSRN: http://ssrn.com/abstract=687493. In the case of companies posting a 3% margin requirement for OTC derivatives, cash flow will take a one-time hit. Future net capital will decline, but lagged net capital – which is assumed to be prior to the margin requirement payment – will be unchanged. Therefore, the next period's capital investment should decline in response to the drop in cash flow-to-lagged net capital.

[5] The jobs multiplier was created as a composite of the following 13 sectors: Construction, Oil and gas field machinery and equipment, Paper industry machinery manufacturing, All other industrial machinery manufacturing, Office machinery manufacturing, Other commercial and service industry machinery manufacturing, Special tool, die, jig, and fixture manufacturing, Turbine and turbine generator set units manufacturing, Electronic computer manufacturing, Other communications equipment manufacturing, Automobile and light truck manufacturing, Software publishers, and Custom computer programming services. These industries are broadly representative of the main categories in the Bureau of Economic Analysis's National Income and Product Accounts investment spending.