



# An Analysis of the Business Roundtable's Survey on Over-the-Counter Derivatives

Prepared For:  
Business Roundtable

Prepared For:  
Keybridge Research

April 14, 2010

---

## I. Introduction

One aspect of financial regulatory reform deals with the unregulated over-the-counter (OTC) derivatives market. Several versions of proposed legislation<sup>1</sup> would impose a series of new regulations on transactions executed in the OTC derivatives market. Among other significant changes, the proposed regulations intend to subject dealers and Major Swap Participants to capital and margin requirements on cleared and un-cleared transactions. Although exemptions may apply for certain non-financial firms, there remains some ambiguity over the extent of these potential exemptions.

## II. Survey Description

In response to the current debate on OTC derivatives regulation, Business Roundtable ("BRT") recently conducted a survey on the usage of OTC derivatives to gauge the potential effects of proposed legislation, including a margin requirement. The Derivatives Survey was in the field in the winter and spring of 2010. Of the 169 member CEOs on the Business Roundtable, 43 participated in the survey – a response rate of 25%. Of these 43 companies, 39 reported the use of OTC derivatives, and 27 non-financial firms provided data on the notional amounts of their OTC derivatives exposure. From a statistical point of view, 27 responses offers a basic level of statistical support for viewing the results from these companies as an approximation of the total population of BRT companies.

## III. Key Findings

- Roughly 72% of survey participants report that proposed regulations would have a significant impact on their hedging activities; 26% say that new legislation would have a moderate impact; and only 3% say the new rule would have no impact.
- A 3% margin requirement, assuming no exemptions, would result in aggregate collateral of \$33.1 billion for non-financial, publicly traded BRT companies. On average this would be equal to \$269 million per firm (median: \$105 million), or roughly 15% of cash on the balance sheet (median: 7%) and 5.5% of operating cash flow (median: 4.8%).
- On a cumulative basis, non-financial, publicly traded BRT companies would be likely to respond to the imposition of margin requirements on OTC derivatives by reducing capital spending by -0.9% to -1.1%, or about \$2.0 to \$2.5 billion, assuming no exemptions.
- Extending the analysis to the S&P 500 companies, this note estimates that a 3% margin requirement on OTC derivatives could be expected to reduce capital spending by \$5 to \$6 billion per year, leading to a loss of 100,000 to 120,000 jobs, including both direct and indirect effects.

---

<sup>1</sup>Senator Dodd's (D-Conn.) recently released financial reform proposal, the U.S. House of Representatives' "Wall Street Reform and Consumer Protection Act of 2009" passed last December, and the Obama Administration's financial regulatory framework introduced by the U.S. Treasury last summer.

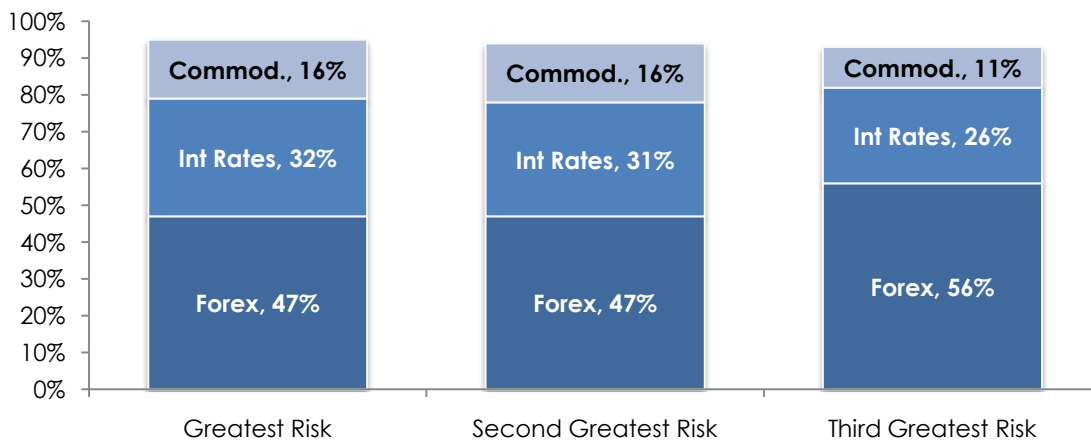
---

---

#### IV. Detailed Findings

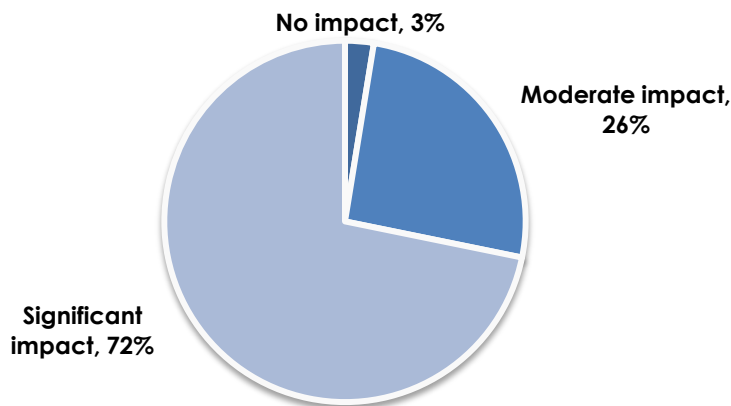
- More than 90% (39/43) of survey participants report the use of derivatives. The responding companies represent \$1.5 trillion in revenues (equivalent to more than 10 percent of U.S. national GDP) and 2.5 million employees (as of 12/31/2008).
- 34 BRT companies reported OTC derivatives exposure as of 9/30/2009. The combined mark-to-market value was \$7.2 billion and the total notional value was \$660.6 billion. The median OTC derivatives exposure was \$2.9 billion per firm (notional value).
  - 27 of these survey participants are non-financial firms, of which the total notional value of OTC derivatives was \$508 billion as of 9/30/2009. The median exposure was \$2.9 billion in notional value.
  - Among non-financial BRT companies, as of 9/30/2009, the median ratio of OTC derivatives (notional value) to total assets was roughly 18% and the median ratio of OTC derivatives (notional value) to cash was roughly 246%.
- 47% of BRT companies report foreign currency exposure as the top risk hedged with OTC derivatives, followed by interest rate risk (32%) and commodity price risk (16%). Similarly, survey participants' report that, on average, 41% of derivatives are used for hedging foreign currencies, 36% to manage interest rate risks, and 17% to hedge commodity prices.
- Over the past two years, excluding the effect of hedges, survey participants' costs associated with price movements of foreign currencies, interest rates, and commodities have increased, on average, by \$273 million, \$209 million and \$390 million, respectively.
- Among non-financial survey respondents, 83% of all derivatives used are OTC, 89% are GAAP-compliant, and only 23% of firms use credit default swaps.
- 47% of BRT companies report foreign currencies as the top risk hedged with OTC derivatives, followed by interest rates (32%) and commodities (16%).

**Top Three Risks Hedged With OTC Derivatives**



- 
- Nearly 3 out of 4 (72%) survey participants say that proposed regulations would have a significant impact on their business; 26% say that new legislation would have a moderate impact; and only 3% say the new rule would have no impact.

#### Impact of Margin Requirements on Hedging Activities



#### V. Financial & Economic Implications

Proposed legislation requiring 3% cash collateral on OTC derivatives could result in a significant diversion of cash flow from normal operating and investment activities. 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 Business Roundtable non-financial, publicly traded companies. The analysis assumes no exclusions from the margin requirement.

The analysis follows the following methodology applied to non-financial, publicly traded Business BRT companies:

- (1) Calculate the median ratio of [notional value of] OTC derivatives-to-assets for non-financial survey respondents;
- (2) Use this ratio to estimate the notional values for non-financial, publicly traded BRT companies (for which there is available financial data);
- (3) Assume a 3% margin requirement paid in cash;
- (4) Calculate cash balance, cash flow, and liquidity ratios before and after the margin requirement;
- (5) 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% decrease in capital investment among BRT companies.

- As of 9/30/2009, the median ratio of OTC derivatives (notional value) to total assets for survey participants was 17.5%.

- 
- This ratio, based on 27 non-financial publicly traded BRT companies, was then applied to the remaining 96 BRT companies that are nonfinancial and that are not privately held firms.
  - The total (reported plus estimated) notional value of OTC derivatives for BRT companies is \$1,104 billion.
  - A 3% margin requirement would result in aggregate collateral of \$33.1 billion. On average this would be equal to \$269 million per firm (median: \$105 million), or roughly 15% of cash on the balance sheet (median: 7%).
    - The margin requirement would result in an average reduction in operating cash flow of -5.5% (median: -4.8%).
    - Short-term liquidity ratios would decline proportionally to the reduction in cash balances. The typical (median) BRT company's net worth would decline by -1.3%, and the current ratio, quick ratio, and acid test would fall by -1.6%, -2.0%, and -2.6%, respectively.
  - 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% reduction in cash flow/lagged net capital (CF/LNC) leads to a 0.06% to 0.07% reduction in capital expenditures/lagged net capital (CX/LNC).<sup>2</sup>
    - The average decline in the ratio of cash flow to lagged net capital (CF/LNC), due to the posting of margin requirements, would be about 1% (mean = 0.98%; median = 1.32%)
    - The resulting decline in the ratio of capital spending to lagged net capital (CX/LNC) would average approximately -0.06% to -0.07%.
    - This means that on a cumulative basis, non-financial, publicly traded BRT companies would be likely to respond to the imposition of margin requirements on OTC derivatives by reducing capital spending by -0.9% to -1.1%, or about \$2.0 to \$2.5 billion, assuming no exemptions.

## VI. Jobs Effects for the S&P 500 Companies

- It is possible to extend the analysis above to the group of S&P 500 companies.
- Assuming that S&P 500 companies have roughly the same OTC derivative exposure as the BRT survey participants, then a 3% margin requirement on OTC derivative exposure could be expected to have a proportionally larger effect on capital spending.
  - Historical data shows that capital spending by the S&P 500's constituents totaled \$566 billion in 2008 (latest full year data available). A 1% decline, as indicated in the analysis above, would therefore be equal to approximately a \$5 to \$6 billion per year reduction in capital spending.

---

<sup>2</sup>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.

---

- 
- 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 is responsible for approximately 19,643 jobs including both direct and indirect effects.<sup>3</sup> Therefore, a 3% OTC derivative margin requirement might be expected to eliminate approximately 100,000 to 120,000 jobs economy wide.

---

<sup>3</sup> 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.

---