

THE ECONOMIC IMPACT OF THE CURRENT IASB AND FASB EXPOSURE DRAFT ON LEASES

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About Chang & Adams Consulting:

Chang & Adams Consulting is a premier California-based economics and management consulting firm, operating at the intersection of the public and private sectors. We specialize in applying cutting-edge quantitative analyses to help frame and solve issues pertaining to public policy and business strategy. We advise a range of clients, including government agencies, non-profit organizations, industry associations, campaigns for initiatives and candidates and Fortune 1000 companies. We provide them with the analytical insight to shape their strategic direction, improve their operations and develop sound policies.

The report was commissioned by several of the leading nonprofit and commercial organizations concerned with economic growth in the United States and in the health of the real estate sector in particular. The members of the coalition include the U.S. Chamber of Commerce, The Real Estate Roundtable, NAIOP, Commercial Real Estate Development Association, NAIOP Inland Empire Chapter, NAIOP Southern California Chapter, the National Association of Realtors and the Building Owners and Managers Association International. The coalition’s objective in sponsoring the study is to ensure that the analysis of costs and benefits of proposed new accounting standards for leases includes a thorough consideration of the economics of commercial and industrial real estate leasing and development, so that changes to financial reporting do not distort market behavior and cause damage to both the real estate market and the national economy.



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Current IASB and FASB Exposure Draft on Leases
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**The Economic Impact of the
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(Key Findings)**

- The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board's (FASB) proposed accounting standard would increase the apparent liabilities of U.S. publicly traded companies by \$1.5 trillion, the equivalent Gross State Product of 20 states.
- Approximately \$1.1 trillion of this would be attributable to balance sheet recognition of real estate operating leases while the remainder would come from recognizing equipment and other leases as liabilities.
- In the Best Case scenario, the new standard would destroy approximately 190,000 U.S. jobs, or more than the total employment of both Google and Ford Motors. In the Worst Case, there would be a loss of 3.3 million jobs, or the combined global employment of IBM, UPS, McDonalds, Target, Kroger, HP, PepsiCo, Bank of America, GE, and General Motors.
- In the Best Case, U.S. Gross Domestic Product (GDP) would be reduced by \$27.5 billion annually, which is larger than the Gross State Product (GSP) of Vermont. GDP would be lowered by \$478.6 billion annually in the Worst Case, or the combined GSPs of Minnesota, South Carolina, and Montana.
- In the Best Case, the household earnings would be reduced by \$7.8 billion annually, or decrease the earnings of the average U.S. household by \$68 a year. In the Worst Case, this decrease is \$135.2 billion a year, or a decrease of \$1,180 per household.
- U.S. public companies would face \$10.2 billion in annual costs from the increased interest on borrowing and commercial real estate would lose \$0.6 billion in value when the rule is fully implemented in the Best Case scenario.

- Under the Worst Case, companies would reduce their debt by \$173.9 billion annually and lessors would lose \$14.8 billion in the value of their commercial real estate.
- Other effects, such as higher rents, further reduced real estate value due to shortened lease terms, administrative costs and problems resulting from obscured financial reporting have not been calculated. Moreover, the impact from the recognition of non-real estate operating leases has not been estimated in this study.

The Economic Impact of the Current IASB and FASB Exposure Draft on Leases

1. Introduction

The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) signed a memorandum of understanding in 2006 to expedite the global convergence of accounting standards. As part of this effort, IASB and FASB formed a workgroup to jointly develop a new accounting standard for leases.

Currently, under U.S. Generally Accepted Accounting Principles (GAAP), there are two types of leases: capital leases (also known as finance leases) and operating leases. Capital leases are accounted for on company balance sheets as liabilities and corresponding assets, essentially as if the underlying leased asset were owned. In contrast, operating leases, in which the lessor retains significant rights of ownership of the leased asset, are accounted for as rental expense on company income statements. Additional accounting information about significant operating leases is disclosed in notes to the income statement.

U.S. GAAP criteria for treating a lease as a capital lease rather than as an operating lease include:

- The lease transfers ownership to the lessee at the end of the lease term;
- The lease contains a bargain purchase option, under which the lessee can purchase the leased property at a price significantly below the expected fair value of the leased property at the end of the lease term;
- The term of the lease (plus any bargain renewal option) is equal to or greater than 75 percent of the estimated economic life of the leased property; or
- The present value of the minimum lease payments is equal to or greater than 90 percent of the fair value of the leased property.

These GAAP criteria, under which leases are generally capitalized when companies essentially own the underlying assets, would be repealed by IASB and FASB's proposed

new standard. The existing distinction between capital and operating leases would be eliminated and replaced with a single method of accounting that would treat all leases that exceed one year as capital leases. To accomplish this result, lessees would create a notional asset on their balance sheets reflecting their “ownership” of the right to use the leased asset. They would also record a corresponding notional liability derived from the computation of the present value of the expected lease payments (along with several other assumptions).

The first Exposure Draft of this proposed standard was released in August 2010. An outpouring of written public comments following the release led the working group to announce it would re-expose the draft and accept more feedback in July 2011. Currently, the timeline indicates that the second Exposure Draft is due to be released in the first half of 2012. The date on which the proposed standard would become effective is still to be determined.

IASB and FASB have undertaken their work on this proposed new accounting standard to improve financial reporting. However, the proposed one-size-fits-all approach would have a considerable negative impact on the business operations of the majority of firms that faithfully represent their finances and thus on the larger U.S. and global economies. Published comments to date have focused primarily on the accounting and administrative burdens that would result from the proposed standard and issues surrounding obscuring of financial reporting. But requiring lessees to recognize hundreds of billions of new liabilities would also alter the manner in which publicly traded companies manage their operations and finances. The capitalization of operating leases would impact a broad number of financial metrics that are used by investors, causing a number of firms to violate their lending covenants and retarding their ability to acquire new credit. It would force firms to cut their spending. And it would generate losses in real estate value.

While the proposed standard would have broad impact, this report quantifies only the economic impact of capitalizing real estate operating leases within the United States.

Specifically, the report measures the following three specific effects:

- Reduced spending by companies necessitated by deleveraging in order to deal with apparent increases in liabilities
- Increasing borrowing costs for lessees with higher debt ratios
- Reduced value of real estate resulting from contraction of the economy

It should be noted that there are other significant costs that have not been defined by this study. These include the likely decrease in U.S. real estate values that would result from shorter lease terms. Several commenters noted that the proposed standard would induce lessees to prefer shorter-term leases, or to elect to purchase real property in lieu of leasing it, to demonstrate stronger balance sheets. They also include the higher lease payments that companies are expected to incur as lessors shorten their lease terms. Other excluded costs include higher costs from lessees creating and implementing extensive information systems and accounting processes to track all leases in detail; hiring outside consultants to assist with prospective judgments about issues such as lease option exercise; and engaging in more frequent lease negotiations resulting from shorter-term leases. It should be noted that Intel, URS and Chevron report that complying with the new standard would increase accounting costs by \$6 million, up to \$10 million and more than \$50 million respectively. Finally, our costs exclude the risks and associated costs for users of financial statements resulting from obscured company cash flows and legal liabilities of leases – the complexity of the proposed capital lease liability accounting methods could make it more difficult to assess the financial strength of a company since, for example, companies with leases could choose from a number of complicated methods of estimating the associated notional liability.

The following sections of the report lay out the study methodology; the estimated increase in reported balance sheet liabilities that U.S. publicly traded firms would face under

the proposed standard; the fiscal implications given potential responses of lessees and lenders; the resulting economic impacts on the United States; and key implementation questions and policy considerations for IASB and FASB. Our conclusion summarizes our findings and associated policy considerations.

2. Methodology

Our methodology is based on generally accepted principles of business administration, policy analysis and economics. We describe our overall approach here and provide additional details and sources in the appendices.

The fiscal impact of the proposed standard is calculated by estimating three factors:

- *Reduced spending by U.S. publicly traded companies:* U.S. public companies would have strong incentives to lower spending and liabilities as a result of the standard's negative impact on several key financial ratios. Firms would to some extent lower spending to manage inflated liabilities and reduced earnings.
- *Increased interest on borrowing:* U.S. publicly traded companies would experience increased interest on borrowing as a result of the recognized risk associated with increased liabilities and decreased earnings.
- *Reduced commercial real estate values:* Property values would be negatively impacted by two factors. First, lessors' property value is in part determined by the quality of the leases – that is, the financial and operational stability of the lessees and the terms of the leases. Longer leases equate to higher property values and because lease terms are expected to shorten under the proposed standard, real estate values would decline to reflect the shorter terms. Second, property values would diminish as a result of the overall permanent decrease in U.S. economic activity. Our calculations of reduced real estate values should be considered conservative because only the second factor is estimated.

The focus of the report is solely related to the lease liabilities for commercial real estate for publicly traded U.S. companies. If the report used the total estimated liability for all leases, the effect would undoubtedly be much higher.

Reduced Spending By U.S. Publicly Traded Companies

To estimate the reduction in expenditures by U.S. publicly traded companies resulting from deleveraging in response to the inflation in their reported liabilities, we calculated the current liability-to-asset ratio of U.S. publicly traded companies. We then calculated how the liability-to-asset ratio would change by adding the new liabilities associated with operating leases to these companies' balance sheets.

Our Best Case scenario is based on the notion that companies and markets would simply “get used to” the higher levels of liabilities and higher debt ratios and not change their behavior as a result of newly recognized liabilities. In the Best Case, the market simply accepts the new accounting environment without adjustment. Our Worst Case scenario is based on the notion that companies would reduce their spending significantly to pay down debt, in order to move closer to the “normal” liability-to-asset ratio prior to the implementation of the new standard. Our Mid Case assumes that the actual response of firms would fall in between these two poles. All three scenarios are reflected in Table 2.1.

Table 2.1
Scenario Methodology

Scenario	Definition
Best Case	Companies and markets “get used to” higher debt ratios; spending is not reduced in order to lower inflated balance sheet liabilities
Mid Case	Companies accept a marginal increase in debt ratios and also reduce spending to partially lower inflated liabilities
Worst Case	Companies reduce spending in order to lower debt ratios to pre-standard norm

SOURCE: Chang & Adams Consulting; Total Assets and Liabilities. Standard and Poor's, retrieved from the COMPUSTAT (North America) 2010 database.

The methodology is detailed in Appendix A.

There would be a great fluctuation in the ranges of businesses affected by the rulemaking. Certain companies and business sectors are more reliant on leasing space to operate or are already highly leveraged. The volatility of those affected companies and sectors would account for the vast burden of the impacts and even small changes to the debt ratios would translate to significant fiscal and economic impacts.

In light of the uncertainty surrounding how companies would ultimately react to significantly inflated levels of balance sheet liabilities, we infer that the Mid Case is a likely prediction of what would happen. Other reports and analyses on this issue, as well as comments that have been submitted to IASB and FASB, indicate that companies would have significant incentives to reduce newly inflated liabilities and reduce spending. In a recent economic analysis for the Equipment Leasing & Finance Foundation, the authors report: “The companies most affected have gone on record saying they will try to offset the negative financial impacts by cutting costs, reducing capital expenditures and inventories and passing on increased lease costs to the customers. They will also look to restructure future leases to lessen the impact of the new accounting regime. These issues will have an impact on the overall economy.”

The impact of the proposed standard would be uneven across the economy and would impact some companies and industries more than others. Companies and industries that do not substantially depend on leased real estate as an operational model will be less significantly impacted. Companies and industries that are heavily leveraged and use an operational model that is dependent on leased space would be most impacted. Ultimately, these impacted companies and industries are most in danger of violating loan restrictions and would modify their behavior most as a result of a the proposed standard.

Increased Interest on Borrowing

To derive the increased cost of borrowing for U.S. publicly traded companies resulting from reduced creditworthiness, we factor the increase in interest rate with our estimate of new commercial real estate loans that occur yearly. We estimate the value of new commercial real estate loans using data obtained from the Federal Reserve Bank over the term of the typical commercial loans. Though the impact on interest rates could vary widely depending on individual companies' current debt levels and their current utilization of leased real estate, our discussions with parties indicate that an increase of 150 basis points is not an unreasonable estimate of the increased interest on borrowing resulting from the new standard. To be conservative about the impact of the proposed standard, we calculated the increase in the total increased interest on borrowing using a regression based on historical data from the Federal Reserve on loan terms and the weighted average cost of capital in the marketplace. We determined that the interest on borrowing would increase by 124 basis points in our Best Case scenario in which companies would not deliver the notional increased liability at all. Our Mid Case scenario assumes that interest rates would increase by 62 basis points and our Worst Case scenario assumes that interest rates increase by zero percent as companies manage their newly recognized lease liabilities to their current liability-asset ratio. Appendix B provides our data detail.

Reduced Commercial Real Estate Values

The impact of the proposed standard on the value of real estate is calculated by deriving the overall impact of lessees' reduced spending and increased cost of credit on U.S. GDP and then determining the proportionate impact on the U.S. commercial real estate market. The impact of the reduced value of real estate is estimated by multiplying the total loss across the entire commercial real estate sector (valued at \$3.9 trillion in 2011 dollars)

against the share of lost GDP resulting from the absorbed new debt liabilities, then amortizing this amount over a 20-year period (the estimate for the useful life of leases).

The reduced value in the report is only counting the ripple effect through the U.S. economy – an extremely conservative analysis. The report does not calculate the decrease resulting from increased rent payments nor the costs of shifting to shorter term leases.

Appendix C details our methodology.

Economic Impact

The impact of the proposed standard on U.S. GDP, jobs and personal earnings is determined by factoring our estimates of fiscal impact with regional economic multipliers obtained from the U.S. Department of Commerce's Bureau of Economic Analysis. Table 2.2 illustrates the multipliers utilized for this analysis. The input-output analysis was ostensibly developed as an effective economic framework by Wassily Leontief (1906-1999), a Soviet economist who emigrated to the United States and joined the faculty at Harvard University in 1931. While there, Leontief adapted input-output analysis to the U.S. economy. By the 1960s economists were widely using input-output analysis to assess impact of policies and events on the economy. For his efforts, Leontief received the 1973 Nobel Prize in Economic Sciences for his pioneering efforts in developing this method. Today, input-output models are used regularly as a national and regional economic impact and forecasting tool. Probably its most visible and publicized use includes projecting the economic impacts of sports facilities, military bases and tourism.

An input-output model divides the national or regional economy into various industrial sectors and tracks how much each industry must purchase from every other industry to produce one unit of output. The model contains feedback loops that force most industries to produce more than the “direct output requirements” would seem to imply. For example, a demand for x percent more automobiles than last year requires y percent more steel. But

steel mills require electricity to run. And an electric utility requires turbines from a factory to produce electricity. That factory in turn needs steel from steel mills to produce turbines and the steel mill requires more electricity and so on. Through a matrix inversion, all of these feedback loops collapse into one step and calculates the extra (“indirect”) output requirements they create. The ratio of the total requirements to the direct requirements is called the input-output multiplier.

Table 2.2
Utilized Multipliers

	Output ⁽¹⁾	Jobs/\$Million ⁽²⁾	Earnings ⁽³⁾
U.S. Weighted Average ⁽⁴⁾	2.5940	18.3533	0.7540
Real Estate Sector	1.8536	9.2575	0.2777

SOURCE: RIMS II multipliers produced by the Regional Product Division of the Bureau of Economic Analysis on 10/21/2011; U.S. GDP estimated at \$14.8 trillion in 2011, based on historical 2.2 percent growth.

NOTES: (1) This number represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by the industry corresponding to the entry.

(2) This number represents the total change in number of jobs that occurs in all industries for each additional 1 million dollars of output delivered to final demand by the industry corresponding to the entry. Because the employment multipliers are based on 2008 data, the output delivered to final demand is adjusted to 2008 dollars.

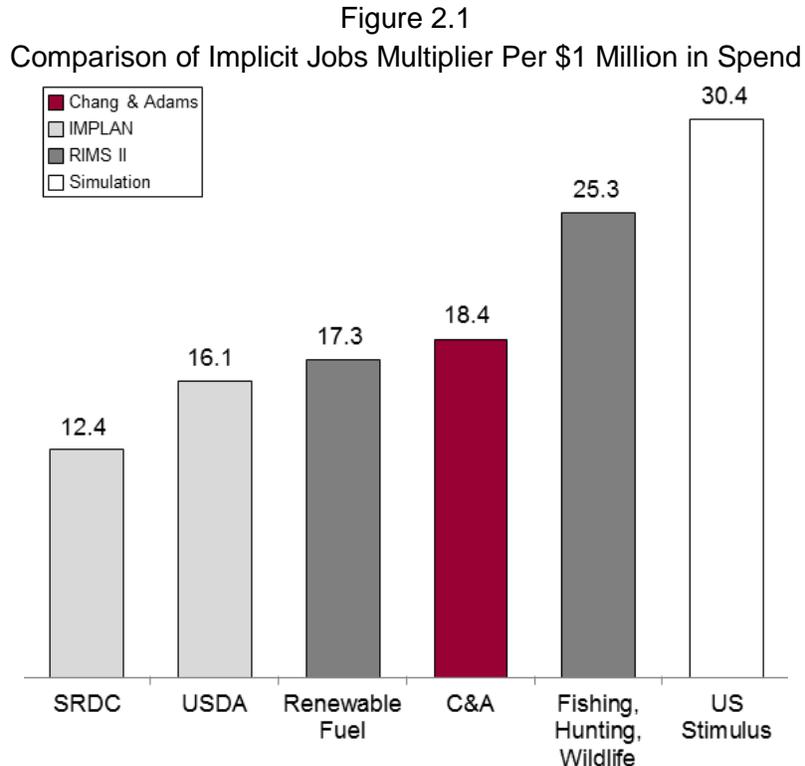
(3) This number represents the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the industry corresponding to the entry.

(4) U.S. weighted average multipliers were derived by weighting U.S. BEA multipliers by their proportional share of U.S. GDP.

Our methodology is detailed in Appendix D.

It should be noted that there are several different approaches and multipliers that could be applied to this particular analysis, such as simulation models. However, we applied the input-output methodology to this situation because we believe that the framework and tools are sufficiently flexible to develop a customizable assessment and the approach suits the policy situation appropriately. It should be noted, although very little literature deals specifically with the economic impact of the proposed standard, we reviewed an array of

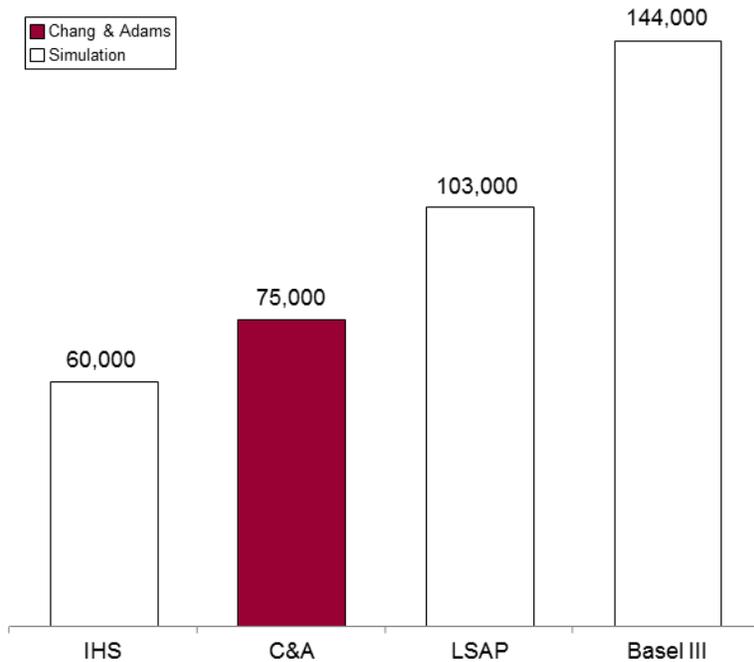
literature that dealt with the impact of reduced spend (vs. shifts in spending) on the national level across multiple sectors of the economy. Most studies that we reviewed assessed economic impact through the use of economic multipliers, though some used simulation models. It should be noted that our assessment of the explicit or implicit economic multiplier for reduced spend was generally within the range of the studies that we reviewed.



SOURCE: Chang & Adams Consulting; Adams, F. Gerard & Byron Gangnes. "Why Hasn't the US Economic Stimulus Been More Effective? The Debate on Tax and Expenditure Multipliers." *World Economics*, Volume 11, Number 4, pages 111 - 130, 2010; Buland, David. "Estimating the Impact on Employment of USDA's Programs in the American Recovery and Reinvestment Act (ARRA)." IMPLAN National User's 8th Biennial Conference, June 2010; Gallardo, Roberto and Al Myles. "Economic Impact of Social Security in the United States." Southern Rural Development Center, Fall 2011; Southwick Associates, Inc. and American Sportfishing Association. "State and National Economic Effects of Fishing, Hunting and Wildlife-Related Recreation on U.S. Forest Service-Managed Lands." *Wildlife, Fish and Rare Plants*, U.S. Forest Service, U.S. Department of Agriculture, January 3, 2007; Urbanchuk, John M. "Contribution of the Ethanol Industry to the Economy of the United States." LECG LLC, Renewable Fuels Association, February 2009.

However, our assessment of the explicit or implicit economic multiplier for the impact of increased cost of capital tended to be on the lower end of the range.

Figure 2.2
Comparison of Jobs Lost Per 50 Basis Point Increase in Cost of Capital



SOURCE: Chang & Adams Consulting; IHS Global, Inc. "Economic Impacts of the Proposed Changes to Lease Accounting Standards." Equipment Leasing & Finance Foundation, December 2011; Meyer, Laurence H. and Antulio N. Bomfim. "The Macro Effects of LSAPs II: A Comparison of Three Studies." Monetary Policy Insights, Policy Focus, February 7, 2011; Slovik, P. and B. Cournède. "Macroeconomic Impact of Basel III." OECD Economics Department Working Papers, No. 844, OECD Publishing, February 2011.

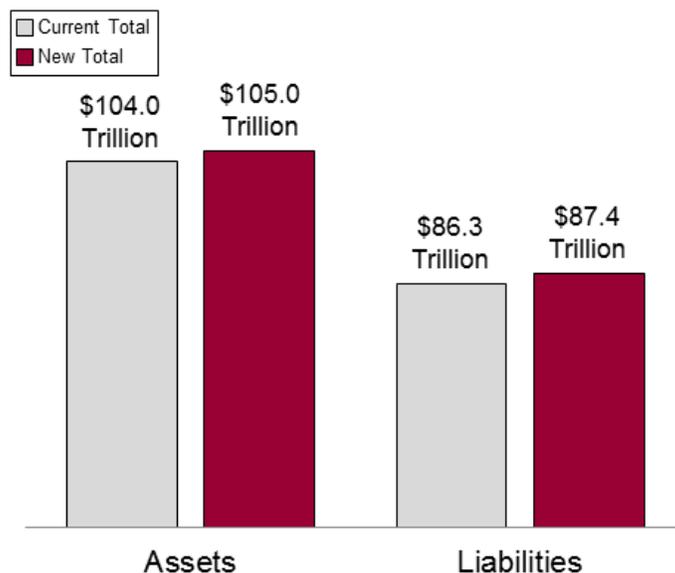
If we were to utilize the mid-range multipliers, our assessment of economic harm would be significantly higher. Appendix E.1 through E.3 describe similar studies with varying macroeconomic models as comparison.

3. Estimated Liability

Using data from the U.S. Securities and Exchange Commission (SEC) and independent reports, we estimate that IASB/FASB's proposed standard would increase the recognized liabilities of U.S. publicly traded companies by \$1.5 trillion, or 1.2 percent. Real estate makes up \$1.1 trillion of that figure. Our estimate is consistent with other reported analyses on this issue.

We estimate that in 2011, U.S. publicly traded companies have assets totaling \$104.0 trillion and liabilities totaling \$86.3 trillion, based on data from the Standard & Poor's Compustat database. With the addition of the new notional liabilities and assets associated with operating leases, companies' reported balance sheet liabilities would grow to \$87.4 trillion and assets would increase to \$105.0 trillion. This amounts to a 1.2 percent increase in total liabilities and 1.0 percent increase in total assets, respectively.

Figure 3.1
Current and Pro Forma Assets and Liabilities of U.S. Publicly Traded Companies, 2011

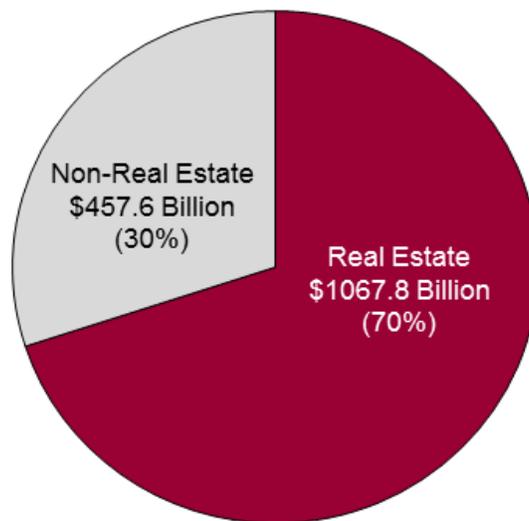


SOURCE: Total Assets and Liabilities. Standard and Poor's, retrieved from the COMPUSTAT (North America) 2010 database; U.S. Securities and Exchange Commission. Report and Recommendations Pursuant to Section 401(c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities and Transparency of Filings by Issuers. Washington: Government Printing Office, 2005.

The current liability-to-asset ratio for all U.S. publicly traded companies would increase with the addition of off-balance sheet liabilities as required under the proposed standard. In the following sections, we will discuss the importance of these financial ratios and how changing ratios would play an important part in the economic impact of the proposed standard.

For the purpose of our analysis, the commercial real estate sector generally consists of three categories: offices, retail and industrial real estate. Our estimate of the lost value of real estate excludes hotels, self-storage, apartment and seniors housing due to the fact that there is not significant evidence that these elements provide consumer-related services as opposed to business services. Moreover, there is little evidence that these elements typically have leases with terms of more than one year.

Figure 3.2
Estimated Inflation in Balance Sheet Liabilities Resulting from the IASB/FASB Standard



SOURCE: U.S. Securities and Exchange Commission. Report and Recommendations Pursuant to Section 401(c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities and Transparency of Filings by Issuers. Washington: Government Printing Office, 2005.

Of the \$1.5 trillion in new notional balance sheet liabilities that would result from the proposed standard, approximately \$1.1 trillion is attributable to real estate operating leases, while the remainder represents non-real estate leases, such as equipment leases. Consequently, real estate leases would make up the major portion of the inflation in balance sheet liabilities for public companies.

According to Prudential Real Estate Investors, the total market value of commercial real estate in the United States was \$3.8 trillion in 2010. The total market is made up of \$2.1 trillion of office space, \$1.1 trillion of retail space and \$0.6 trillion of industrial real estate. The \$1.1 trillion in new reported liabilities that would result from the proposed standard would affect the entire commercial real estate sector.

Though we have not quantified the economic impact from increased costs of administrative and compliance issues, industry and experts have raised concerns that the new standard would pose a significant new financial burden:

- A vice president with A.M. Best Company stated that the new standard would "likely result in more volatility in financial statements" and implementation costs "could run into the millions of dollars" for individual companies.
- The National Association of Realtors suggests that the standard would result in financial statements that "bear no resemblance, economically or financially, to what happens contractually in a real estate lease" and would "substantially" increase administrative costs for companies in regards to IT systems, human capital, financial reporting and accounting functions and internal controls.
- In comments on the Exposure Draft, the Real Estate Roundtable pointed out that the differing recognition of assets and liabilities as compared with current U.S. GAAP would create mismatches that do not reflect the value of a contract for lessors nor reflect true economic activity for lessees. The complicated recognition and presentation requirements of the standard and front-ended cost patterns would "mask true economic

activity" and would not "reflect the value of a contract." Moreover, they stated that the new accounting standard would actually obfuscate financial statements and thus produce results counter to the intent of the proposal.

4. Fiscal Impact

The IASB/FASB proposed standard would alter companies' key financial ratios by changing their reported assets and liabilities, even without these companies taking any action in response. These ratios are used by investors, financial analysts and creditors to determine the performance and profitability of particular companies. All other things being equal, altering these ratios would significantly impact the earnings and balance sheets of reporting companies.

The impact of the proposed standard on key financial metrics is reflected in the comments submitted about the proposed standard. The impact would be tremendous on publicly-held U.S. companies:

“It should also be noted that changes to the composition of the financial statements will have a significant impact on traditional financial metrics used to evaluate companies.” - Lori Kopansky, Vice President, Corporate Controller, Gap Inc.

However, the entire international community is very concerned about the rule, as seen in the following quotes:

“The commerciality of a lease is not negotiated based on paying a yield-related expense per month but rather a usage rental that is more akin to the profile of the benefits the entity derives. Hence the proposed treatment does not mirror the economics of the lease and leads to key performance ratios being misleading.” - Tony Burke, Director, Australian Banker's Association

“As a result of the front-end loading of lease expenses, notwithstanding that the underlying financial position of lessees has not changed, financial ratios would be impaired, the risk of loan covenant breaches would increase and lease financing would become more expensive and in many cases less available.” - Deborah Henretta, Chair, APEC Business Advisory Council

“The proposals are also likely to impact financial ratios and debt covenants of entities. This may affect capital requirements based on local regulation and possibly increase the cost of capital for some entities.” -Françoise Flores, Chairman, European Financial Reporting Advisory Group (EFRAG)

Reports on the issue indicate that companies have stated in public comment and news coverage that they would balance the impacts of the rule by cutting costs, reducing capital expenditures and passing on their increased lease costs to consumers.

Liquidity, as shown through a decrease in the current ratio, would be affected as the standard would make it more difficult to cover short-term debt. Higher debt-to-equity and related debt ratios would result from the inflation of reported liabilities. Earnings volatility would result from accelerated interest and amortization in early years of a lease and reduced income statement impact in later years. Times interest earned would decrease with lower earnings available to meet interest payments.

Decreasing asset turnover would be interpreted by investors as an inefficient use of fixed assets. Profitability ratios such as return on assets, return on equity and profit margin that highlight a company's ability to generate earnings against its expenses would all decrease under the proposed standard.

Table 4.1 Financial Ratio Impact for Lessees

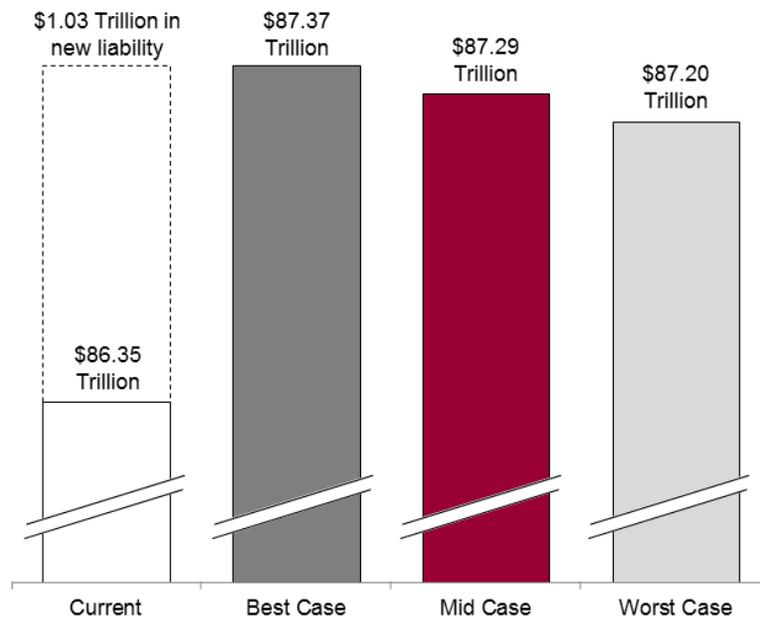
Ratio Category	Public Comments	Financial Ratio	Impact	Description
Leverage Ratios	<p>“Our concern is that the proposal, as drafted, will lead to significant over-capitalization and volatility (as estimates are re-assessed). In turn, this will unnecessarily inflate leverage ratios and create a capital constraint for banks that are subject to regulatory capital limitations.” -UBS AG, in a public comment letter</p> <p>“We are concerned there will be unintended consequences to leasing transactions due to the proposed changes to lease accounting. Financial statement metrics...will be inappropriately impacted by the additional assets and liabilities recorded by lessees and lessors.” -Tom Jones, Director and Global Head of Accounting Policy, American International Group Inc.</p> <p>“The resulting overstatement of liabilities will result in inflated and inaccurate gearing and other leverage ratios. This could lead to inadvertent breaches of banking covenants and potentially higher costs of finance as the leverage position is inaccurately stated.” -Brett Rix, VP External Reporting and Governance, BHP Billiton Limited</p> <p>“The recording of these transactions will affect financial ratios which could affect existing loan covenants as well as approval for new financing. The equity ratios would decrease which may be a deterrent to new investors who do not understand the impact of this new standard. As a capital intensive industry that requires capital investment to replace equipment, we are dependent upon accurate financial ratios to obtain or maintain access to financing.” -John W. McClelland, Ph.D., Vice President Government Affairs, American Rental Association</p> <p>"As a lending institution, many of our customers' debt covenants are based on EBITDA or leverage ratios which will be impacted by the proposed ASU. The proposed accounting will have a direct impact on EBITDA because rent expense is being reclassified to interest and amortization expense. The interest and amortization expenses produce more volatility to the EBITDA calculation throughout the life of the leases based not only due to the "effective interest" method application, but also due to the uncertainty in estimating renewal options and contingent rent. The proposed guidance will also change the balance sheet with the additions of new assets and liabilities, both of which will affect various leverage ratios." -David Anderson, Corporate Controller, Huntington Bancshares</p>	Debt-to-Equity Ratio	Increase	Total debt increases while total equity decrease
		Debt Ratio	Increase	Assets and liabilities increase by the same amount
		Times Interest Earned Ratio	Decrease	EBIT decreases while interest expense increases
Profitability Ratios	<p>“The FASB/IASB changes related to leasing will result in new operational challenges and a myriad of decisions related to increased leverage and profitability ratios in both a leased or owned real estate portfolio. CFOs will need to take a closer look at real estate. Instead of cost per square foot, CFOs will begin to apply ratios related to utilization and return on assets.” -Bill Early, Senior Vice President, Copaken Brooks</p>	Return on Assets	Decrease	Decrease in net income while there is an increase in total assets
		Return on Equity	Decrease	Assumes equal decrease in net income and equity
		Profit Margin	Decrease	Decrease in net income with no change in net sales

SOURCES: Seay, Sharon S. and Janet Woods. "The Economic Impact of FASB's Proposed New Lease Accounting Standard." Journal of Finance and Accountancy, Volume 8, July 2011; Re: ED/2010/9 Leases; File Ref. No. 1850-100 Proposed ASU, Leases (Topic 840). UBS AG, December 15, 2010; Re: File Reference No. 1850-100 – Proposed Accounting Standards Update, Leases. American International Group, Inc., December 15, 2010; Re: Invitation for Comment on Exposure Draft "Leases." BHP Billiton Limited, December 15, 2010; RE: File Reference Number 1680-100. American Rental Association, July 17, 2009; File Reference No. 1850-100, Re: FASB Exposure Draft of Proposed Accounting Standards Update of Topic 840. Huntington Bancshares Incorporated, December 14, 2010; Early, Bill. "Upcoming FASB/IASB Changes to Lease Accounting Standards." Copaken Brooks, November 2010; Finance and Economics Working Group. "2011 ABAC Report to APEC Finance Ministers." APEC Business Advisory Council, August 25, 2011; File Reference No. 1850-100: Exposure Draft – Leases (Topic 840). Gap Inc., December 10, 2010; ED/2010/9 Leases. Australian Bankers' Association Inc., December 16, 2010; Re: Exposure Draft Leases. European Financial Reporting Advisory Group, December 15, 2010.

Considering the importance of this particular financial ratio, we look specifically at how the proposed standard would affect the liability-to-asset ratio of U.S. publicly traded companies. We have developed three scenarios to estimate the fiscal and economic impact of market reaction:

- *Best Case scenario:* We estimate this would be the result if lessees take no action to reduce the new total liability;
- *Worst Case scenario:* We estimate this would be the result if lessees attempt to reduce their total liability to current ratio levels. This would amount to approximately a 10 percent decrease; and
- *Mid Case scenario:* We estimate that the most likely response would lie between the best and worst scenarios.

Figure 4.1
Projected Public Company Reduction in Debt, by Scenario



SOURCE: Chang & Adams Consulting

Currently, the total liabilities of all publicly traded companies in the United States are approximately \$86.3 trillion and the estimated impact of the proposed standard on

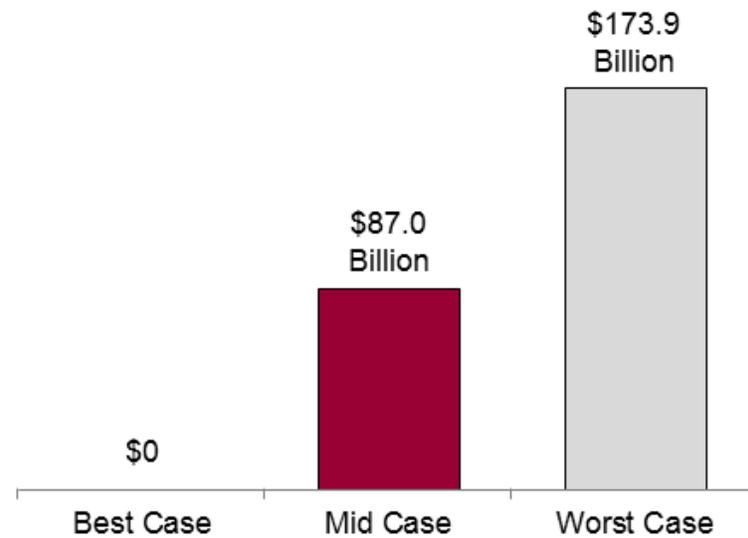
companies is an additional \$1.0 trillion. The range of total liabilities that companies would choose to carry is projected to be from \$87.2 trillion to \$87.4 trillion.

Lessees and lenders would address the resulting overages in total liabilities – the amount of new liabilities that firms would not naturally absorb – in one of two ways: either reducing corporate spending or face increased interest on borrowing. The figures are conservative because the reduced spending incorporates some methods of absorption that are not being quantified:

- Loan and note terms could be adjusted or renegotiated by mutual consent. This would result in direct losses by financial lenders and some losses by lessees as well.
- Some companies would be unable to renegotiate their loans and would be cut off from access to working capital due to violations of their debt covenants. In this case, some amount of the lessees' loans could be written off by lending institutions and note holders as bad debt. Much of the impact of this would be borne by financial lenders.

This report estimates the absorption of new liabilities that U.S. public companies would need to address on their balance sheets. The proposed standard would reduce their spending to manage the increased liabilities by up to \$173.9 billion, as demonstrated in our Worst Case scenario. The Mid Case of \$87.0 billion is a conservative estimate, particularly because it assumes the entire burden is borne by lessees, whereas any burden borne by lenders would have a greater impact on the economy. In our Best Case scenario, we assume that companies would simply live with the newly recognized higher notional liability and would not reduce their spending at all.

Figure 4.2
Reduced Corporate Spending



SOURCE: Chang & Adams Consulting

We estimate the total fiscal impacts of the proposed standard by deriving the impact of the total reduction in expenditures, companies' increased borrowing costs and the lost value of real estate, with the new liabilities and increased borrowing costs being borne by lessees and the lost real estate value being borne by lessors. First, the total reduction in expenditures is calculated by taking the total overage in liabilities and determining the total need for new credit to meet those liabilities. Second, the assumed additional cost of borrowing for lessees is calculated by using a regression to determine the increase in the total increased interest on borrowing in the marketplace. Third, the estimated impact to real estate value is calculated by comparing the 2011 Consumer Price Index (CPI) adjusted size of the commercial real estate sector to the 2011 U.S. GDP, with the loss amortized over a 20-year period at 6 percent.

Table 4.2
Average Annual Fiscal Impacts⁽¹⁾
(\$Billion)

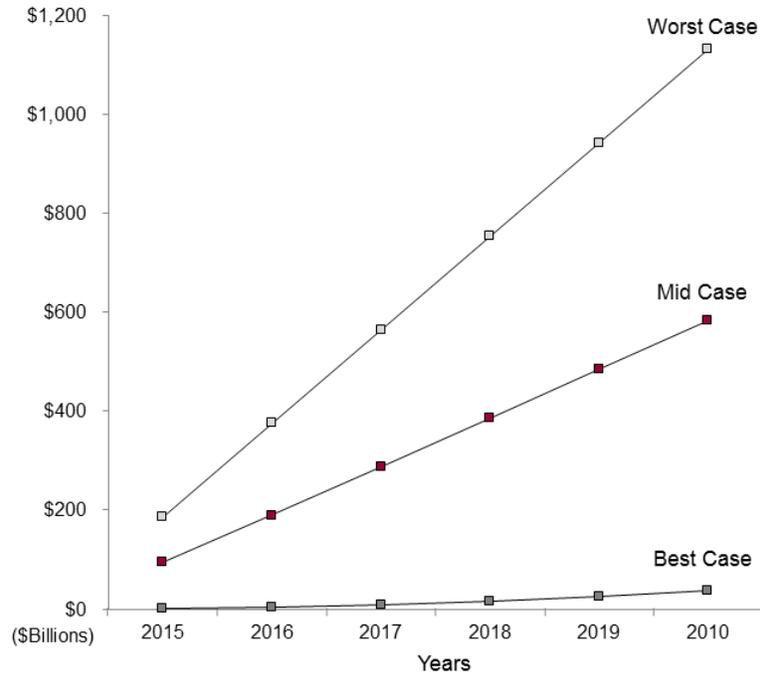
	Best Case	Mid Case	Worst Case
Reduced Spending	\$0.00	\$86.96	\$173.92
Increased Cost of Borrowing	\$10.16	\$5.08	\$0.00
Lost Value of Commercial Real Estate	\$0.61	\$7.71	\$14.81
Total	\$10.76	\$99.75	\$188.73

SOURCE: Chang & Adams Consulting

NOTES: (1) Annual average upon full implementation of the rule change in year six

Table 4.2 estimates the total fiscal impact of the proposed standard. In the Worst Case, the fiscal impact of the proposed standard would reduce \$189 billion in direct expenditures annually. Under our Mid Case scenario, the proposed standard would reduce corporate expenditures by \$100 billion annually. Even under the Best Case scenario, the impact of the proposed standard is not wholly without consequence and would reduce corporate expenditures by over \$11 billion annually.

Figure 4.3
Total Fiscal Impact
Cumulative

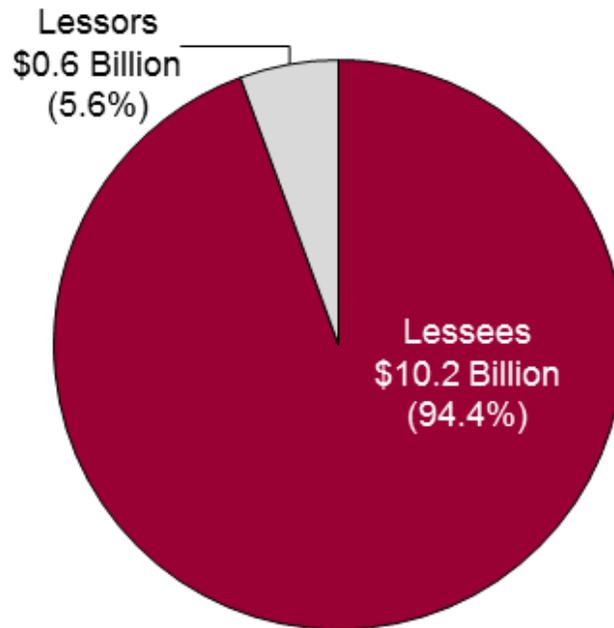


SOURCE: Chang & Adams Consulting

The report takes a conservative view that leases will only be renewed at higher rates when they come due. In a stable state, we estimate the upper-end estimated impact of the proposed standard would exceed \$1 trillion cumulatively over six years. The total Worst Case would be approximately \$1.1 trillion, while the Mid Case impact would be approximately \$585.0 billion. Even under the Best Case scenario, the cumulative impact would approach \$37.7 billion.

Figure 4.5 exhibits the distribution of the burden under the Best Case scenario.

Figure 4.4
Distribution of Burden of New Standard
Best Case



SOURCE: Chang & Adams Consulting

As shown above, lessees would be burdened with an additional \$10.2 billion increase in the interest on increased borrowing and lessors would bear \$0.6 billion in the lost value of commercial real estate under the Best Case. Lessees would not need to absorb any new liability under the Best Case.

Lessees would bear a \$5.1 billion increase in the interest on increased borrowing and \$87.0 billion additional liability in the Mid Case and a zero increase in interest and \$173.9 billion additional liability in the Worst Case. In the Worst Case, lessees would have completely managed their spending and not incur any additional interest costs. The lost value of commercial real estate could range from as low as \$0.6 billion in the Best Case, as discussed above, to a high of \$14.8 billion in the Worst Case. The Mid Case estimates the loss in value to be approximately \$7.7 billion.

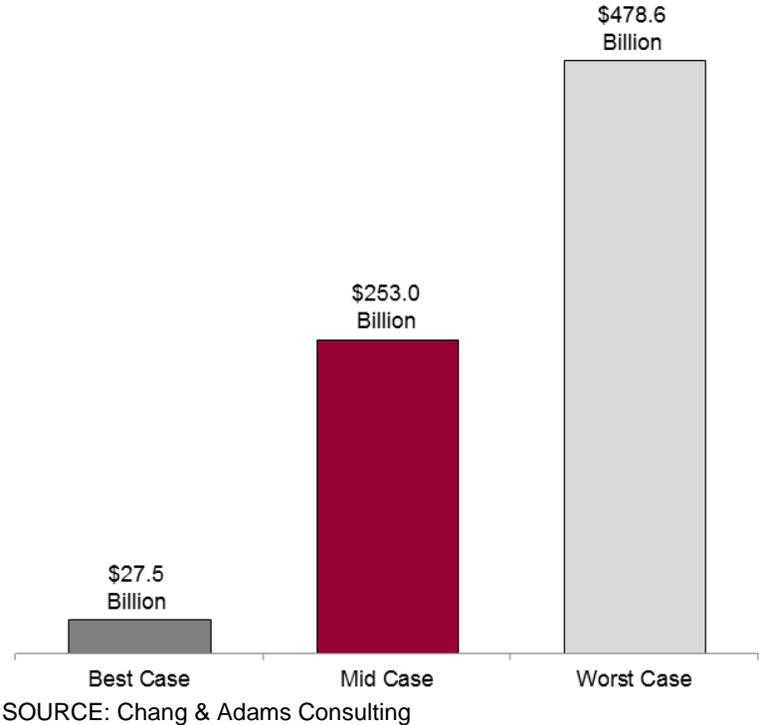
5. U.S. Economic Impacts

When the standard is fully implemented, the proposed standard would reduce GDP in the Best Case scenario by \$96.2 billion over the initial six years of implementation, eliminate 190,000 jobs in the United States and reduce personal earnings by \$27.4 billion over that six year period. Under the Worst Case scenario, GDP losses would total \$2.9 trillion, job losses would approach 3.3 million and personal earnings would fall by \$811.5 billion over six years. The Mid Case scenario predicts the proposed standard would reduce GDP by \$1.5 trillion, eliminate 1.8 million jobs and reduce personal earnings by \$419.4 billion over six years.

Output Impact

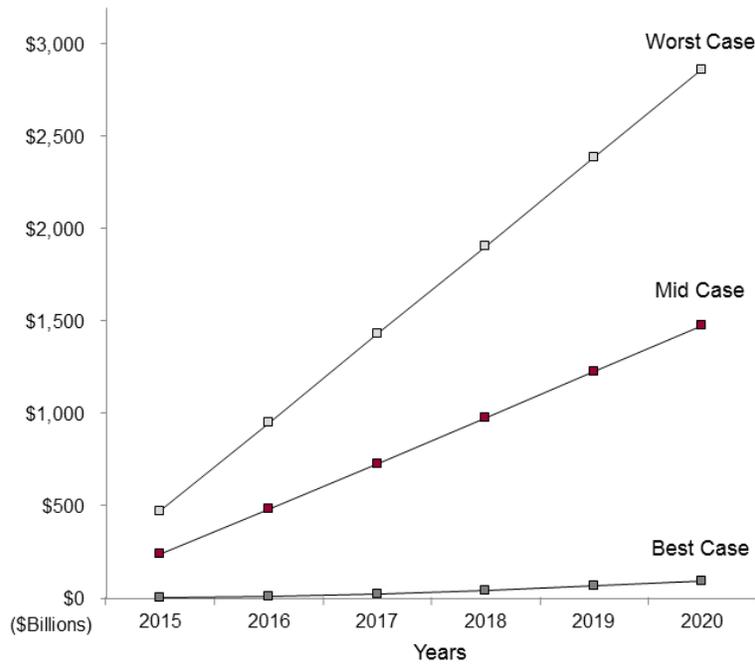
Under the Best Case scenario, the proposed standard would reduce U.S. GDP by \$27.5 billion (GDP) annually upon full implementation in year six, which is larger than the GSP of Vermont. Under the Mid Case, the annual loss to economic output would be approximately \$253.0 billion. Under the Worst Case, the annual economic output lost would be approximately \$478.6 billion, more than the combined GSP of Minnesota, South Carolina, and Montana.

Figure 5.1
Annual Lost Economic Output, 2020



Under the Best Case scenario, over a six year period, GDP would be reduced by a total of \$96.2 billion. Under the Worst Case scenario, it would be reduced by a total of \$2.9 trillion

Figure 5.2
Lost Economic Output (2015-2020)



SOURCE: Chang & Adams Consulting

Employment Impact

When fully implemented, 190,000 jobs would be lost in the U.S. economy in the Best Case, more than the combined employment of Ford Motors and Google. This equates to a loss of over 0.2 percent of the total number of non-farm jobs in the U.S. The U.S. unemployment rate would increase by 0.1 percentage points.

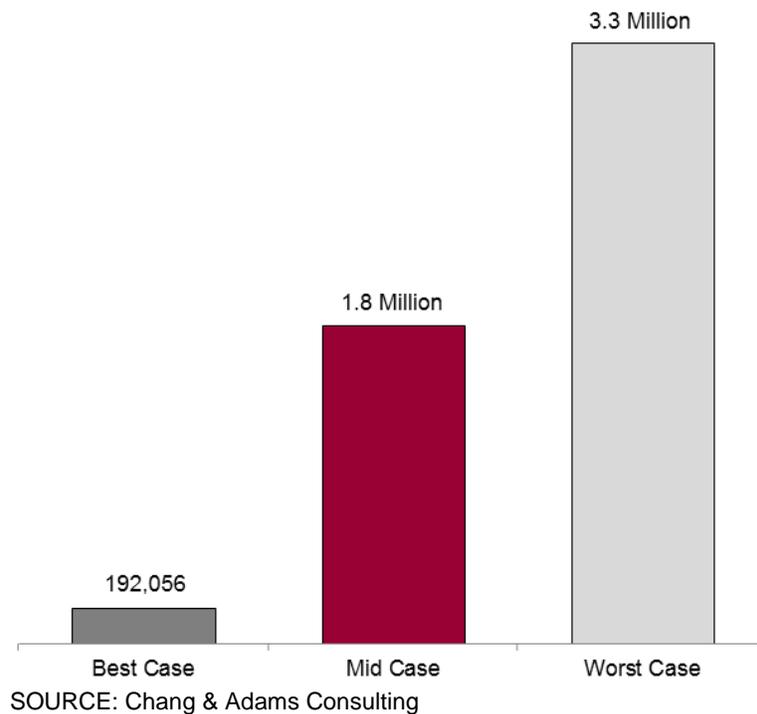
Lost jobs in the Mid Case would reach 1.8 million and equate to a loss of over 1.3 percent of the total non-farm employment in the U.S. Looking at these job losses another way, the U.S. unemployment rate would increase by 1.1 percentage points. This equates to

the combined employment of Wells Fargo, AT&T, Home Depot, FedEx, United Technologies, Lowe's, Best Buy and Boeing.

In the Worst Case, 3.3 million jobs would be lost. This equates to a loss of over 2.5 percent of the total number of non-farm jobs in the U.S. The U.S. unemployment rate would increase by 2.2 percentage points. The jobs lost would equal the combined global employment of IBM, UPS, McDonalds, Target, Kroger, HP, PepsiCo, Bank of America, GE and General Motors.

In the short term, these job losses are the expected total outcome; however, the market may make adjustments over the course of the implementation. The Best Case loss figure represents the minimum job loss estimates under any circumstances.

Figure 5.3
Lost Jobs

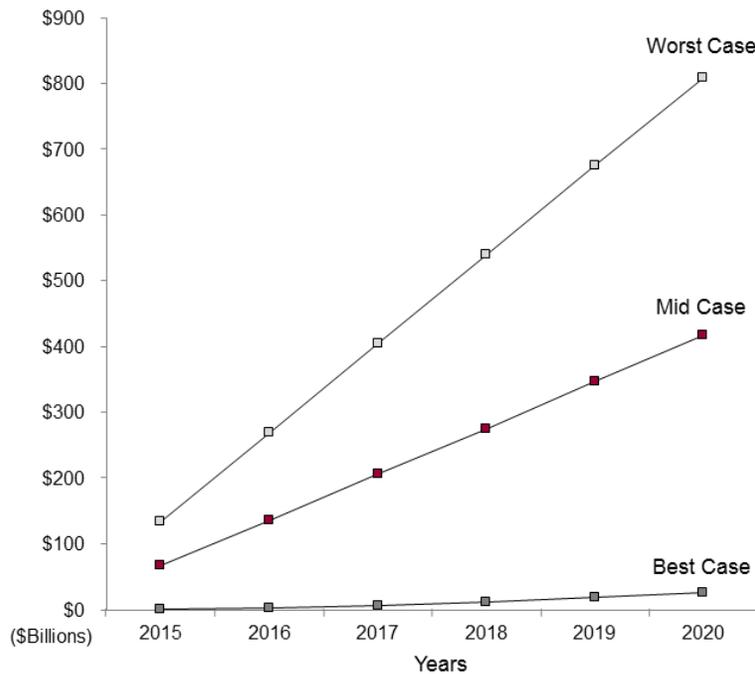


Impact on Personal Earnings

When fully implemented, there would be a reduction in earnings of \$7.8 billion annually in the Best Case; over a six year period, earnings would be reduced by \$27.4 billion. In the

Mid Case, there would be a reduction in earnings of \$71.5 billion annually; over a six year period, earnings would be reduced by \$419.4 billion. In the Worst Case, there would be a reduction in earnings of \$135.2 billion annually; over a six year period, earnings would be reduced by \$811.5 billion. This would cost the average household between \$68 in earnings per year in the Best Case and \$1,180 per year in the Worst Case.

Figure 5.4
Lost Earnings (2015-2020)



SOURCE: Chang & Adams Consulting

6. Key Implementation Questions and Policy Considerations

In addition to the significant fiscal and economic impacts of the proposed standard, our analysis also raises several questions about the implementation of the standard:

- Do policy benefits of disclosing a notional risk outweigh resulting economic harm?
- Do operating real estate leases represent the same type of risk as a capital acquisition? Should real estate operating leases be represented differently than riskier liabilities? Has disclosing operating leases via footnote been inadequate?
- Does the standard add clarity for users of financial statements (investors) or further obscure reporting? Public comments and reports have noted that the standard would obscure financial reporting and alter metrics used by companies to measure performance and company health.
- What are the administrative burdens to lessees and users of financial reports?
- If IASB and FASB are planning a tiered phase-in, how would the groups propose to adopt the standard without distorting the economy during the phase-in period?

IASB and FASB may also wish to address certain policy considerations to minimize distortions in economic behavior that we project would be induced by the proposed standard. For example, the resulting artificial shifts in financial ratios very predictably would cause significant reactions from both companies and market participants and those reactions would have significant negative economic impacts. Likewise, the predicted shortening of real estate leases would lead directly to reductions in real estate values. Because real estate bears a disproportionate impact with respect to the expected GDP losses from the proposed standard and because real estate represents the preponderant share of the increased balance sheet liabilities, IASB and FASB should undertake a careful study of the expected negative impact on real estate values from shortened lease terms and have a clear understanding of this issue before proceeding.

7. Conclusion

IASB and FASB's goal of greater transparency and clarity in accounting disclosure is commendable. However, the proposed standard on leases would have significant negative impacts on jobs and the U.S. economy while potentially degrading the accounting transparency of real estate operating leases and destroying the comparability of public company income statements and balance sheets.

Our study examined how companies would absorb the inflated liabilities that would result from the proposed standard's treatment of real estate operating leases; the increased cost of credit that the proposed standard would cause; the violations of lending covenants it would generate; the reduced spending it would bring; and the lower real estate values it would create. We estimate that to address the increase in their stated liabilities, public companies would be forced to pay down existing debt of \$87.0 billion each year. The cost of paying down this debt could reach as much as \$173.9 billion annually. Lessees would face additional costs of credit of \$10.2 billion annually and lessors would bear \$0.6 billion in lost value to their real estate in the Best Case (excluding the expected diminution in real estate values attributable to shorter lease terms, which we have not examined in this study).

The absorption of new liability alone would cost the U.S. economy approximately 190,000 jobs in the Best Case, increasing the national unemployment rate by 0.2 percentage points. It would reduce U.S. GDP by \$27.5 billion each year when fully implemented and eliminate approximately \$7.8 billion in annual household earnings. As noted, there are additional impacts due to the higher cost of borrowing to lessees and reduced real estate values to lessors.

Whether to change long-standing and apparently well-functioning operating lease accounting rules by capitalizing all real estate operating leases is a policy question beyond the scope of this analysis. The goal of this paper has been to identify the economic and

fiscal impacts from such action so that accounting standard setters can make decisions on the basis of complete information about the anticipated consequences resulting therefrom. Given the significant negative economic consequences that we project, we recommend further critical studies of these issues.

Appendix A
Reduced Spending By U.S. Publicly Traded Companies
(\$Billion)

The reduced spending for companies is calculated based on the excess in unabsorbed liabilities when using a variety of debt ratios. The ratio ranges are based on the pre-standard ratio (Worst Case), post-standard ratio (Best Case) and a Mid Case in the middle. The asset and liability totals come from Standard and Poor's Compustat database and the estimate of off-balance sheet liabilities comes from a 2005 SEC study.

	Best	Mid	Worst
Compustat Evaluation of Total Assets of Publicly-held Companies in 2010	\$100,968.6		
Compustat Evaluation of Total Liabilities of Publicly-held Companies in 2010	\$83,849.5		
Consumer Price Index Adjustment from 2010 to 2011	x (224.55 / 218.056)		
2011 Estimate of Total Assets	\$103,975.4		
2011 Estimate of Total Liabilities	\$86,346.5		

	Best	Mid	Worst
SEC Estimate of Total Off-Balance Sheet Operating Leases	\$1,252.0		
Consumer Price Index Adjustment from Dec. 2003 to 2011	x (224.55 / 184.30)		
Share of Real Estate Liability	x 70%		
2011 Estimate of Total Off-Balance Sheet Operating Leases	\$1,025.75		

	Best	Mid	Worst
2011 Total Assets	\$103,975.4		
2011 Estimate of Total Off-Balance Sheet Operating Leases	+ \$1,025.75		
Total Assets, with Newly Recognized Liabilities	\$105,001.2		
2011 Estimate of Total Liabilities	\$86,346.5		
2011 Estimate of Total Off-Balance Sheet Operating Leases	+ \$1,025.75		
Total Liabilities, with Newly Recognized Liabilities	\$87,372.2		

	Best	Mid	Worst
Initial Liability-to-Asset Ratio	83.05%		
Liability-to-Asset Ratio, with Newly Recognized Liabilities	83.21%		
2011 Estimate of Total Off-Balance Sheet Operating Leases	\$1,025.75		
Maximum Liabilities	\$87,372.2 (83.21%)	\$87,285.3 (83.13%)	\$87,198.3 (83.05%)
Reduced Total Expenditures (New Liabilities – Max Liabilities)	\$0	\$87.0	\$173.9

**Appendix B
Increased Interest on Borrowing
(\$Billion)**

The increased interest in borrowing is calculated using the total value of commercial real estate loans and commercial and industrial loans from the Federal Reserve. Typical lease terms are calculated using lease term data from the Federal Reserve as well. The additional cost of credit rate was calculated using a simple regression of historical weighted average cost of capital data from the Federal Reserve multiplied against the total shift in debt ratios from the Worst Case to Best Case.

	Best	Mid	Worst
Total U.S. Commercial Real Estate Loans and Commercial & Industrial Loans	\$2,737.3		
Percentage of U.S. GDP Attributable to U.S. Publicly Traded Companies	x 30%		
Total U.S. Commercial Real Estate Loans and Commercial Loans Attributable to U.S. Publicly Traded Companies	\$821.2		
Typical Lease Terms	/6		
Value of Annual New Loans	\$136.9		
Additional Cost of Credit Rate Resulting from Proposed Standard	1.24%	0.62%	0%
Additional Interest on Borrowing in Year 1	\$1.7	\$0.8	\$0
Additional Interest on Borrowing in Year 2	\$3.4	\$1.7	\$0
Additional Interest on Borrowing in Year 3	\$5.1	\$2.5	\$0
Additional Interest on Borrowing in Year 4	\$6.8	\$3.4	\$0
Additional Interest on Borrowing in Year 5	\$8.5	\$4.2	\$0
Additional Interest on Borrowing in Year 6 (Full impact to economy)	\$10.2	\$5.1	\$0

Regression Statistics	
Adjusted R Square	0.949537841
Standard Error	0.402042509
Observations	34

	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-11.87347702	-2.766839159	0.011556274
Liability/Asset Ratio	7.468964428	3.414063141	0.002610411
2004	-0.408296505	-1.099175955	0.284133495
2005	0.559238853	1.13289803	0.270026543
2006	1.622332902	2.600225189	0.016707775
2007	0.959336582	1.149968794	0.263084764
2008	-1.129788623	-2.109898824	0.04703829
2009	-0.705008157	-2.205342324	0.038712003
2010	-1.287949843	-3.660595443	0.001458331
2011	-2.177535504	-4.56031004	0.000170265
1st Quarter	0.006989863	0.035054278	0.97236753
2nd Quarter	0.117179333	0.568888032	0.575466516
3rd Quarter	-0.010924235	-0.050330626	0.960334574

Appendix C
Reduced Commercial Real Estate Values
(\$Billion)

The total value of commercial real estate was priced using data in a report from Prudential Real Estate Investors. Using the total economic output impact from the entire off-balance sheet liability, the percentage of U.S. GDP lost as a result of the standard was calculated, as the value of real estate would decrease based upon the total impact to the economy. The value of the affected segment of commercial real estate is amortized at 6 percent of a 20-year period.

	Best	Mid	Worst
Total Market Value of All Commercial Real Estate, 2010	\$3,800.0		
Consumer Price Index Adjustment from 2010 to 2011	x (224.55 / 218.056)		
Total Market Value of All Commercial Real Estate, 2011	\$3,913.2		
Weighted Average Cost of Capital	6%		

	Best	Mid	Worst
Lessee Economic Output Impact of Fully Absorbed \$1.5 Trillion Liability in Year 6	\$21.3	\$368.2	\$644.5
Estimated U.S. GDP, 2011	÷ \$14,846.1		
Lost Output as Percentage of U.S. GDP in Year 6	0.14%	2.48%	4.34%
Total Market Value of All Commercial Real Estate, 2011	x \$3,913.2		
Size of Commercial Real Estate Sector Affected in Year 6	\$5.6	\$97.1	\$169.9
Lost Value of Real Estate in Year 1 (amortized at 6% over 20 years)	\$0.1	\$7.5	\$14.8
Lost Value of Real Estate in Year 2	\$0.2	\$7.5	\$14.8
Lost Value of Real Estate in Year 3	\$0.3	\$7.6	\$14.8
Lost Value of Real Estate in Year 4	\$0.4	\$7.6	\$14.8
Lost Value of Real Estate in Year 5	\$0.5	\$7.7	\$14.8
Lost Value of Real Estate in Year 6	\$0.6	\$7.7	\$14.8

**Appendix D
Annual Economic Impact
(\$Billion)**

The economic impacts are calculated using the total fiscal impacts for lessees (reduced spending and increased interest on borrowing) multiplied against a U.S. Department of Commerce-developed RIMS II multiplier weighted by industry-share of U.S. GDP and the total fiscal impact for lessors (lost value of commercial real estate) multiplied against real estate multiplier.

	Best	Mid	Worst
Reduced Total Expenditures	\$0	\$87.0	\$173.9
Cost of Credit	+ \$10.2	+ \$5.1	+ \$0
Total Lessee Fiscal Impact	\$10.2	\$92.0	\$173.9
Total Lessor Fiscal Impact (Lost Value of Real Estate)	\$0.6	\$7.7	\$14.8
Weighted Output Multiplier	Total Lessee Fiscal Impact x 2.5940		
Real Estate Output Multiplier	Total Lessor Fiscal Impact x 1.8536		
Economic Output Impact, Lessees	\$26.4	\$238.7	\$451.1
Economic Output Impact, Lessors	+ \$1.1	+ \$14.3	+ \$27.5
Total Economic Output Impact	\$27.5	\$253.0	\$478.6
Weighted Jobs Multiplier	Total Lessee Fiscal Impact x 18.3533		
Real Estate Jobs Multiplier	Total Lessor Fiscal Impact x 9.2575		
Jobs Impact, Lessees	186,450	1,689,183	3,191,916
Jobs Impact, Lessors	5,606	71,357	137,108
Total Jobs Impact	192,056	1,760,540	3,329,024
Weighted Earnings Multiplier	Total Lessee Fiscal Impact x 0.7540		
Real Estate Earnings Multiplier	Total Lessor Fiscal Impact x 0.2777		
Earnings Impact, Lessees	\$7.7	\$69.4	\$131.1
Earnings Impact, Lessors	\$0.2	\$2.1	\$4.1
Total Earnings Impact	\$7.8	\$71.5	\$135.2

Appendix E.1
Reduced Spending By U.S. Publicly Traded Companies
Comparative Economic Studies

Study	Description of Study	Key Relevant Findings	Approach
<p>Adams, F. Gerard & Byron Gangnes, <i>Why Hasn't the US Economic Stimulus Been More Effective? The Debate on Tax and Expenditure Multipliers</i>, World Economics, Volume 11, Number 4, pages 111 - 130, 2010.</p>	<p>This paper evaluates alternative empirical approaches to measuring the impact of fiscal policy and presents new results based on simulations of a large econometric model of the US economy.</p>	<ul style="list-style-type: none"> ▪ For every 1% permanent tax credit, there is a 2% growth in real GDP after 4 years and a 1.1% growth in employment ▪ The implicit multipliers for these initial impacts would mean a GDP multiplier of 7.3885 and an employment multiplier of 30.3867 jobs per \$1 million. 	<p>IHS Global Insight's US Macro Model - IHS Global Insight's Macroeconomic Model is a multiple-equation model of the U.S. economy. Consisting of over 1,200 equations, the model is solved iteratively to generate the results of different policy and forecast scenarios.</p>
<p>David Buland, USDA Natural Resource Conservation Service economist, <i>Estimating the Impact on Employment of USDA's Programs in the American Recovery and Reinvestment Act (ARRA)</i>, IMPLAN National User's 8th Biennial Conference, June 2010.</p>	<p>This paper presents information regarding how the USDA quantified the economic impact of ARRA spending based on implicit multipliers from as many as 121 IMPLAN sectors.</p>	<ul style="list-style-type: none"> ▪ Based on \$22.1 billion in direct spend, the implicit multiplier for economic output would be approximately 2.37. ▪ An implicit multiplier of 16.1 jobs per \$1 million in direct spend. 	<p>The IMPLAN model describes commodity flows from producers to intermediate and final consumers. The total industry purchases of commodities, services, employment compensation, value added and imports are equal to the value of the commodities produced.</p>
<p>Southern Rural Development Center in partnership with the Center for Rural Strategies, <i>Economic Impact of Social Security in the United States</i>, Mississippi State, Fall 2011.</p>	<p>This exploratory study focuses on the economic benefits of Social Security, particularly Old Age Survivor Disability Insurance (OASDI), in the national economy.</p>	<ul style="list-style-type: none"> ▪ The report states that 2009 OASDI payments totaled \$675 billion, leading to an impact of \$1.2 trillion in economic output and 8.4 million in supported employment. ▪ The implicit multiplier for output is approximately 1.8 and 12.4 jobs per \$1 million in spend. 	<p>The IMPLAN model describes commodity flows from producers to intermediate and final consumers. The total industry purchases of commodities, services, employment compensation, value added and imports are equal to the value of the commodities produced.</p>

Study	Description of Study	Key Relevant Findings	Approach
<p>Renewable Fuels Association, prepared by LECG LLC, <i>Contribution of the Ethanol Industry to the Economy of the United States</i>, February 2009.</p>	<p>This study estimated the fiscal and economic impact of the nationwide ethanol industry, in production, research and development and infrastructure.</p>	<ul style="list-style-type: none"> ▪ In 2008, the ethanol industry had \$28.6 trillion in direct spend into the U.S. economy. ▪ The input resulted in \$65.8 trillion impact on GDP, \$19.9 trillion impact on earnings and 494,000 in supported employment. ▪ The implicit multipliers used for the study amount to 2.2960 for GDP, 0.6965 for earnings and 17.2765 for jobs. 	<p>The Department of Commerce's Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II) is used to study how one industry's production affects the production of other industries in an economy.</p>
<p>Southwick Associates, Inc. and American Sportfishing Association, <i>State and National Economic Effects of Fishing, Hunting and Wildlife-Related Recreation on U.S. Forest Service-Managed Lands, Wildlife, Fish and Rare Plants</i>, U.S. Forest Service, U.S. Department of Agriculture, January 3, 2007.</p>	<p>This report measures the economic contributions from wildlife-based recreation nationwide, including all total expenditures. The report notes that the sum of the state effects will not equal the U.S. effects as U.S.-level multipliers are greater than the sum of the states.</p>	<ul style="list-style-type: none"> ▪ The implicit multipliers for hunting are 2.73 for output, 23.29 for jobs and 0.68 for earnings. ▪ The implicit multipliers for fishing are 2.82 for output, 25.79 for jobs and 0.73 for earnings. ▪ The implicit multipliers for wildlife viewing are 2.49 for output, 26.76 for jobs and 0.72 for earnings. 	<p>The Department of Commerce's Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II) is used to study how one industry's production affects the production of other industries in an economy.</p>

**Appendix E.2
Increased Interest on Borrowing
Comparative Economic Studies**

Study	Description of Study	Key Relevant Findings	Approach
<p>Equipment Leasing & Finance Foundation, IHS Global Insight, <i>Economic Impacts of the Proposed Changes to Lease Accounting Standards</i>, Washington, DC 2011.</p>	<p>This study assessed the financial and economic impact of the proposed IASB/FASB standard on operational lease liability recognition. The study determined the impact on equity and impact on jobs and GDP as a result of increased cost of capital. In addition, the study assessed the impact of the standard on US public company debt and the impact on pretax income.</p>	<ul style="list-style-type: none"> ▪ Every 50 basis point increase in the cost of debt translates to a potential \$10 billion in lost GDP and 60,000 fewer jobs. 	<p>IHS Global Insight's US Macro Model - IHS Global Insight's Macroeconomic Model is a multiple-equation model of the U.S. economy. Consisting of over 1,200 equations, the model is solved iteratively to generate the results of different policy and forecast scenarios.</p>
<p>Meyer, Laurence H. and Antulio N. Bomfim, <i>The Macro Effects of LSAPs II: A Comparison of Three Studies</i>, Monetary Policy Insights Policy Focus commentary, February 7, 2011.</p>	<p>This study assessed the impact of the Large Scale Asset Purchase (LSAP) on longer term interest rates and the responsiveness of aggregate demand to such changes.</p>	<ul style="list-style-type: none"> ▪ LSAP program likely will reduce the 10-year Treasury yield by 20 basis points, increase the eight-quarter-ahead level of real gross domestic product by 0.4 percentage points, reduce the unemployment rate by 0.2 percentage points and increase employment by 350,000 jobs. ▪ Implicitly, we estimate that for every 50 basis point increase in the cost of capital to U.S. publicly traded companies correlates to 103,000 jobs for U.S. publicly traded companies, based on 30 percent of U.S. GDP being produced by publicly traded companies and 39 percent of all bank loans and leases relating to either commercial and industrial loans or commercial real estate. 	<p>Macroeconomic Advisors Macro Model of the U.S. – Macroeconomic Advisors Macro Model of the U.S. economy is a quarterly structural macro model with roughly 745 variables, 134 estimated equations and 201 exogenous variables.</p>

Study	Description of Study	Key Relevant Findings	Approach
<p>Slovik, P. and B. Coumede, <i>Macroeconomic Impact of Basel III</i>, OECD Economics Department Working Papers, No. 844, OECD Publishing, 2011.</p>	<p>This study estimates the medium-term impact on economic output of the announced Basel III capital requirements using a consistent approach across the three main OECD economies.</p>	<ul style="list-style-type: none"> ▪ The analysis suggests an average impact on annual GDP growth in the range of -0.05 to -0.15 percentage points during a five year period. ▪ In the United States, the Macroeconomic Impact of a 100 basis point increase in bank lending rates would result in a 0.93 percent reduction in GDP. ▪ Assuming a 1:1 GDP to employment ratio, only the 30 percent of the US economy which is attributable to publicly traded companies would be impacted and 39 percent of all loans are attributable to commercial and industrial loans and commercial real estate, each 50 basis point increase would translate into 144,000 jobs. 	<p>The medium-term macroeconomic impact of Basel III is estimated using adjusted semi-elasticities of the OECD New Global Model.</p>

**Appendix E.3
Reduced Commercial Real Estate Values
Comparative Economic Studies**

Study	Description of Study	Key Relevant Findings	Approach
<p>NAIOP Research Foundation, <i>The Contribution of Office, Industrial and Retail Development and Construction to the U.S. Economy</i>, December 2010.</p>	<p>This study by Stephen S. Fuller in conjunction with McGraw-Hill Construction Analytics, analyzes the economic impact of commercial real estate development on the national economy.</p>	<ul style="list-style-type: none"> ▪ Hard costs (actual construction costs) contribute \$148.66 billion to US GDP, 44.67 billion to personal earnings and supports 1.23 million jobs. ▪ Soft costs, site development and tenant improvements contribute 139.35 billion to US GDP, \$44.43 billion to personal earning and supports 1.2 million jobs. 	<p>The Department of Commerce's Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II) is used to study the economic impact and contributions to GDP, personal earnings and employment.</p>

Appendix F Bibliography

- Adams, F. Gerard & Byron Gangnes. "Why Hasn't the US Economic Stimulus Been More Effective? The Debate on Tax and Expenditure Multipliers." *World Economics*, Volume 11, Number 4, pages 111 - 130, 2010.
- Basel Committee Accounting Task Force. Public Comments on Exposure Draft – Leases. Basel Committee on Banking Supervision, December 15, 2010.
- Bezdek, Roger H. and Robert M. Wendling. "Fuel Efficiency and the Economy." *American Scientist*, Volume 93, Number 2 (p. 132 - 139).
- Buland, David. "Estimating the Impact on Employment of USDA's Programs in the American Recovery and Reinvestment Act (ARRA)." IMPLAN National User's 8th Biennial Conference, June 2010.
- Table 5. Composition of consumer unit: Average annual expenditures and characteristics. Consumer Expenditures - 2010. U.S. Department of Labor, Bureau of Labor Statistics, September 27, 2011.
- "Consumer Price Index - September 2011." U.S. Department of Labor, Bureau of Labor Statistics, October 19, 2011.
- "Cost of Capital Update." Corporate Executive Board, November 2008.
- "Current-Dollar and 'Real' Gross Domestic Product." U.S. Department of Commerce, Bureau of Economic Analysis. <http://www.bea.gov/national/xls/gdplev.xls>, accessed October 2011.
- Drummer, Randyl. "Tenants, Landlords Could Face Dramatic Changes from New Lease Accounting Rules." CoStar Group, September 1, 2010.
- Early, Bill. "Upcoming FASB/IASB Changes to Lease Accounting Standards." Copaken Brooks, November 2010.
- ED/2010/9 Leases. Australian Bankers' Association Inc., December 16, 2010.
- File Reference: No. 1850-100, Exposure Draft: Leases and Exposure Draft, Leases, ED/2010/9. Real Estate Roundtable, December 3, 2010.
- File Reference No. 1850 - 100: Exposure Draft – Leases (Topic 840). Gap Inc., December 10, 2010.
- File Reference No. 1850-100, Re: FASB Exposure Draft of Proposed Accounting Standards Update of Topic 840. Huntington Bancshares Incorporated, December 14, 2010.

Finance and Economics Working Group. "2011 ABAC Report to APEC Finance Ministers." APEC Business Advisory Council, August 25, 2011.

Financial Accounting Standards Board, "Financial Accounting Series, Exposure Draft, Proposed Accounting Standards Update, Leases (Topic 840)." FASB, August 17, 2010.

Franzen, Laurel A., Kimberly J. Rodgers and Timothy T. Simin. "Capital Structure and the Changing Role of Off-Balance-Sheet Lease Financing." Draft Working Paper, August 2009.

Fuller, Stephen S. "The Contribution of Office, Industrial and Retail Development and Construction to the U.S. Economy." NAIOP Research Foundation, December 2010.

Gallardo, Roberto and Al Myles. "Economic Impact of Social Security in the United States." Southern Rural Development Center, Fall 2011.

Hamilton, Brian. "The State of the Real Economy: Where Private Companies Stand & Why You Should Care." Sageworks Inc. September 22, 2011.

IHS Global, Inc. "Economic Impacts of the Proposed Changes to Lease Accounting Standards." Equipment Leasing & Finance Foundation, December 2011.

Industry Employment & Labor Force - by Annual Average. Employment Development Department, Labor Market Information Division, September 16, 2011

Invitation to comment - Exposure Draft Leases. Ernest & Young, December 1, 2010.

Kilpatrick, Bob G. and Nancy L. Wilburn. "Convergence On A Global Accounting Standard For Leases – Impacts Of The FASB/IASB Project On Lessee Financial Statements." International Business & Economics Research Journal, Vol. 10, No. 10. October 2011.

Letter: File Reference Number 1850-100, Leases (Topic 840), National Association of Realtors, Government Affairs Division, December 1, 2010.

Meyer, Laurence H. and Antulio N. Bomfim. "The Macro Effects of LSAPs II: A Comparison of Three Studies." Monetary Policy Insights, Policy Focus, February 7, 2011.

"National Income and Product Accounts - Gross Domestic Product, 3rd quarter 2011 (advance estimate)." U.S. Department of Commerce, Bureau of Economic Analysis, October 27, 2011.

Paglia, John K. "An Overview of Covenants in Large Commercial Bank Loans." The RMA Journal, September 2007.

Re: ED/2010/9 Leases; File Ref. No. 1850-100 Proposed ASU, Leases (Topic 840). UBS AG, December 15, 2010.

Re: Exposure Draft Leases. European Financial Reporting Advisory Group, December 15, 2010.

Re: File Reference No. 1850-100 – Proposed Accounting Standards Update, Leases. American International Group, Inc., December 15, 2010.

RE: File Reference Number 1680-100. American Rental Association, July 17, 2009.

Re: Invitation for Comment on Exposure Draft "Leases." BHP Billiton Limited, December 15, 2010.

"Relationship Between Cost of Capital and Credit Rating." Corporate Executive Board Company, November 2010.

Rosenberg, Diana. "Standard operating procedure: a proposed merger of two accounting sets into one global system has insurers voicing concern." Best's Review, June 1, 2011.

Seay, Sharon S. and Janet Woods. "The Economic Impact of FASB's Proposed New Lease Accounting Standard." Journal of Finance and Accountancy, Volume 8, July 2011.

Selvidge, Ross S. "FAS-talking 2: Real Estate Portfolio Impact on Financial Statements and Preparing for Change." CB Richard Ellis, Global Research and Consulting, Spring 2010.

Slovik, P. and B. Cournède. "Macroeconomic Impact of Basel III." OECD Economics Department Working Papers, No. 844, OECD Publishing, February 2011.

Southwick Associates, Inc. and American Sportfishing Association. "State and National Economic Effects of Fishing, Hunting and Wildlife-Related Recreation on U.S. Forest Service-Managed Lands." Wildlife, Fish and Rare Plants, U.S. Forest Service, U.S. Department of Agriculture, January 3, 2007.

Table A2. Family Status and Household Relationship of People 15 Years and Over, by Marital Status, Age and Sex. America's Families and Living Arrangements. U.S. Census Bureau, 2011.

"The Case for Commercial Real Estate." Prudential Real Estate Investors, Prudential Investment Management, March 2011.

"The Employment Situation - October 2011." U.S. Department of Labor, Bureau of Labor Statistics, November 4, 2011.

Titman, Sheridan and Garry J. Twite. "Law and the Duration of Real Estate Leases." Property, Land Use & Real Estate Law eJournal, Working Paper Series. January 25, 2011.

Total Assets and Liabilities. Standard and Poor's, retrieved from the COMPUSTAT (North America) 2010 database.

Urbanchuk, John M. "Contribution of the Ethanol Industry to the Economy of the United States." LECG LLC, Renewable Fuels Association, February 2009.

U.S. Federal Reserve System. Assets and Liabilities of Commercial Banks in the United States (Weekly) – H.8. December 9, 2011.

U.S. Federal Reserve System. Flow of Funds Accounts of the United States – Z.1. December 2004 through December 2011.

U.S. Federal Reserve System. Survey of Terms of Business Lending – E.2. May 2003 through September 2011.

U.S. Securities and Exchange Commission. *Report and Recommendations Pursuant to Section 401(c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities and Transparency of Filings by Issuers*. Washington: Government Printing Office, 2005.

"Value Added by Industry as a Percentage of Gross Domestic Product, 2006–2009," Survey of Current Business. U.S. Department of Commerce, Bureau of Economic Analysis, January 2011.

"What do the proposed lease accounting changes mean for you?" Ernst & Young, August 23, 2010.