Testimony
of
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Chairman Baucus, Chairman Camp and members of the Committees, it is a pleasure to appear before you today to discuss tax reform and the treatment of debt and equity. I am a Professor of Finance at Harvard Business School, a Professor of Law at Harvard Law School and a Research Associate of the National Bureau of Economic Research.

In my comments, I want to describe the fundamental problem raised by the current tax treatment of debt and equity, how changes in the economy and the tax system have raised novel complications to this underlying problem, and outline several alternative solutions. As an aside, I will comment on the possibility that the tax treatment of debt and equity contributed to the recent financial crisis.

A summary of my comments follows:

1. A classical corporate income tax with entity level and individual level taxation creates the potential for asymmetric treatment of debt and equity income. This asymmetric treatment can distort financing, organizational form and investment decisions. In the U.S. system, equity income is taxed twice while debt income is taxed once though assessing the actual relative tax burdens of equity and debt income is complicated by several factors. Indeed, the simple narrative that debt is tax favored is not necessarily true nor is it borne out by recent patterns in the data. In addition to distorting financing choices, the differential in tax treatment creates a host of opportunities for financial engineers to innovate around that distinction.

2. This asymmetric treatment of debt and equity income has been complicated by three significant developments that any reform measure should grapple with. First, the globalization of firms and capital markets makes the tax treatment of multinational firms and transfer pricing concerns central to the corporate tax, increases the likelihood that investor level taxation considerations now involve foreign investors, and allows firms the opportunity to relocate headquarter functions and domiciles across jurisdictions.. Second, the simple characterization of entity level taxation and taxable investors is not consistent with the rapid rise of pass-through entities for business income and with the rise of tax-exempt investors as major players in the capital markets. Third, the corporate tax is now largely for public corporations where financial reporting incentives compete with tax obligations and these incentives can compromise tax policy goals.

3. While excessive leverage is sometimes associated with the tax code because of a presumed debt bias for corporations, concerns over the role of tax policy in fostering the financial crisis appear unfounded. It is difficult to ascribe significant roles for tax incentives in the housing market or for financial institutions as primary or secondary actors in the drama of the financial crisis. For the nonfinancial corporate sector where the presumed debt bias is thought to exist, the startling fact is how unlevered that sector was prior to the crisis. In particular, the rise of cash balances and the decline of net debt is the dominant corporate finance trend of the last decade. A brief and remarkable burst in leveraged buyout activity, that is not related to changed tax incentives, is likely responsible for the perception of excessive leverage in the nonfinancial sector. The increased reliance on equity financing also speaks to the potential scope of the current bias toward debt. For many reasons, the excesses of financial sector leverage are best addressed through regulatory approaches rather than tax instruments.

4. The corporate tax is ripe for reform for many reasons, but excessive leverage does not rank highly amongst them in my view. Regulatory, structural and rate solutions all can be deployed to correct the perceived concerns regarding debt bias. Regulatory approaches which provide arbitrary limits to leverage must be crafted with care as they can create added complexities with limited payoffs. If the stripping of earnings by multinational firms is the concern, then new regulations should be integrated with current policy instruments that already target that problem. Indeed, a lowered corporate rate is the likely best antidote to that behavior. If firm leverage is the concern, then limits on interest deductibility must consider how highly levered industries and organizational forms will be impacted and the consequent effects on their cost of capital and investment levels. Given the uncertainty over the current debt bias, such regulations would appear likely to engender more tax planning than economic benefits.

5. Reforming the corporate tax via a comprehensive business income tax can provide a structural solution to the asymmetric treatment of debt and equity, can undo current distortions to organizational form decisions, and provide a first step toward fundamental tax reform. A more modest approach to modernizing the corporate tax should couple a rate reduction with a move toward territoriality that is funded by better alignment of book and tax reporting and by some taxation of non-C corporation business income. Such reform efforts, rather than regulatory approaches that target excessive leverage, would best advance your admirable agenda of strengthening tax policy and America's economic future.

I. The Problem

The tax treatment of debt and equity claims on business income can distort the form of firm financing, the choice of organizational form and the nature and amount of investment. Tax systems that have entity level taxation of corporations (classical systems) create the possibility of distinctive treatments for the returns to debt and equity investors. Specifically, a corporate tax system which provides for a deduction for interest payments coupled with an individual income tax which taxes returns to debt and equity creates a double tax on equity income. Equity income is taxed twice – first at the entity level and then at the investor level while debt income is taxed only at the investor level. The magnitude of the bias toward debt financing is a function, unsurprisingly, of relative statutory tax rates on corporate income and individual capital income

streams and, more subtly, on situations when effective rates depart from statutory rates and the nature of the capital market equilibrium.

While relative statutory rates are clearly observed, effective tax rates and nature of the capital market equilibrium are not as easily observed. First, deferral of capital gains taxation and the treatment of capital gains at death create uncertainty over the tax burden on one part of the return to equity capital. Second, investors differ in their tax attributes creating the possibility that sorting, or clientele effects, will also partially undo this double taxation. The combination of these first two factors can create settings where equity income is untaxed at the individual level, allowing for the possibility of a tax system, depending on relative corporate and interest income tax rates, that is biased toward equity rather than debt. Third, losses at the corporate level can create situations where entity level taxation is not meaningful. Fourth, uncertainty over future tax rates can also cloud the interpretation of the effects of tax policy. Finally, the effects of the tax treatment of financing on investment is a function of what constitutes the marginal source of financing for investment, which is itself unobservable.

Detecting the effects of taxation on the debt-equity choice is complicated by the various unobservable factors described above and by the other considerations that go into financing decisions. Specifically, informational asymmetries between managers and capital providers make external finance costly, resulting in a preference for investment financed out of retained earnings. Similarly, issuance of equity is thought to be more expensive than issuance of debt because of the poor signal provided by selling ownership rather than a fixed claim. These informational asymmetries are thought to create a financing hierarchy of sorts where retained earnings are favored over debt issuance which is favored over equity issuance.

The current configuration of statutory rates certainly makes a pro-debt bias feasible. Moreover, equity income still generates considerable tax revenue suggesting that individual level taxation of equity income is operative. Nonetheless, tax losses at the corporate level are widespread given the recent crisis and more aggressive tax behavior by corporations. A simple empirical approach to the question of financing bias would show that the U.S. corporate non-financial sector appears remarkably underlevered by historical standards, as described in more detail below. One interpretation of the current situation is that the tax system still provides a pro-debt bias but other financial frictions have led to a reliance on equity capital that is unusual. An alternative interpretation would be that the tax system is neutral or pro-equity biased because of widespread corporate tax losses and the possibility that equity is more lightly taxed at the individual level than debt is.

In addition to distorting the choice of financing, the tax treatment of debt and equity creates another set of behavioral responses because of the difficulties in classifying capital flows as debt or equity. Textbook definitions of debt and equity as fixed obligations requiring repayment and ownership claims, respectively, falsely suggest a bright line distinction. In fact, standard options analysis makes it clear that capital income can be packaged in a nearly infinite variety to conform to arbitrary distinctions. Consequently, financial engineers are quite adept at gaming the artificial distinctions and tax authorities are inevitably catching up to the latest hybrid instruments that capitalize on this labeling problem. Given the tax preference for debt hypothesized above, this involves packaging equity or quasi-equity as debt for tax purposes. As described below, this gaming by managers and financial engineers around the tax treatment of debt and equity has risen in importance as financial reporting considerations are increasingly paramount. This rise has created added pressure to classify claims on corporate income both as

debt for tax purposes and equity for financial reporting purposes in order to allow for tax savings and enhanced reported income to shareholders.

II. The Complications

The underlying problem described above has been exacerbated by several developments in the economy and the tax system. These complications have grown in importance and any potential solutions should address these complications

II. 1. The globalization of firms and investors

The rise of global production networks within firms and the rise of emerging economies have distributed firm activity globally in a remarkable way. Capital market integration has also created an even greater set of portfolio capital flows so that U.S. investors routinely invest in non-U.S. firms and non-U.S. investors are now significant investors in U.S. firms. Mobility of firm activity and financial capital is also now accompanied by mobility of firms themselves as firms can be redomiciled through the market for corporate control or through private equity transactions. Firms also increasingly choose to decenter themselves and have multiple national identities for the purposes of a legal domicile, a financial home and a home for managerial talent. These developments impact any potential tax reform of the treatment of debt and equity in several ways.

First, the tax treatment of debt for the modern global firm must consider interest allocation rules which effectively allocate interest expenses to foreign source income based on ratios of measures of activity such as assets or sales. These interest allocation rules are central to how U.S. firms consider debt-equity choices and the location of that debt. Second, the globalization of firm activity, the rise of tax havens, and the increasing difference between U.S. statutory rates and other country statutory rates, has given rise to increased transfer pricing opportunities, including the location and pricing of intrafirm debt. Third, any effort to correct the bias toward debt through reforms at the shareholder level must address the fact that foreign shareholders of U.S. firms are increasingly important. Finally, any changes must address the fact entrepreneurs and managers are increasingly willing to alter their domiciles in response to tax rules, including the tax treatment of debt and equity.

II. 2. The rise of alternative organizational forms

Nearly half of U.S. business income is now not in the C-corporate form. The rise of alternative organizational forms has transformed the corporate tax into, largely, a tax on public U.S. corporations. As a consequence, the corporate tax is effectively a toll tax on going public. The rise of alternative organizational forms, particularly for financial firms and investment trusts, creates the possibility that large amounts of debt financing is happening for entities that are not subject to entity level taxation. More generally, it demonstrates that responsiveness on the margin of organizational form changes has increased. In a somewhat related vein, tax-exempt investors have transformed the capital markets landscape making assumptions about marginal taxable investors more tenuous. More generally, the presence of tax-indifferent investors can drive more tax arbitrage activities in capital markets.

II. 3. Heightened financial reporting incentives

The dominance of public corporations within the corporate tax has also meant that the corporate tax is paid by firms and managers with an acute focus on reported earnings to shareholders. Most capital markets observers conclude that the rise of high-powered incentives

in public corporations have heighted sensitivity to reported income over the last several decades. As a consequence, managers may resist value-enhancing opportunities created by debt financing as it would result in lower reported income. More generally, the flexibility provided by the arbitrary distinction between debt and equity takes on new value when financial reporting incentives are paramount.

III. An Aside on the Financial Crisis

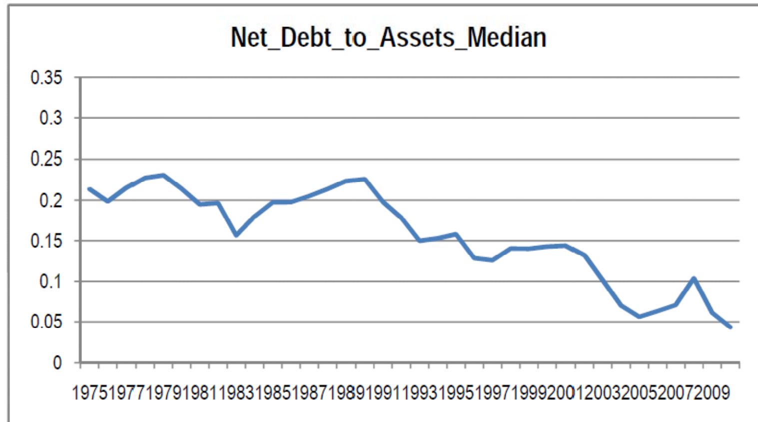
Excessive leverage was a cornerstone of the financial crisis. The forces that contributed to this excessive leverage are varied and it is natural to attribute blame to the tax system when a pro-debt bias potentially exists and when there is so much blame to go around.

III. 1. Taxes and the Financial Crisis

The tax system could have contributed to the financial crisis in three ways: (i) the tax preference for owner-occupied housing could have contributed to the sharp rise in housing values and the excessive leverage against those inflated values, (ii) the excessive leverage of financial institutions could have been caused by the tax system and (iii) the pro-debt bias could have created excessive leverage of non-financial corporations. This hearing is most clearly about iii) but it is useful to briefly comment on i) and ii). In short, the possibilities of i) and ii) are real but there is limited evidence for either nor is there reason to believe that changes in the tax system actually triggered the changes in houseful and financial sector leverage that proved so destructive. Moreover, there are many more compelling explanations for increased housing and financial sector leverage, most notably the insufficient supervision and the misplaced incentives of the financial sector created by monitors, investors and regulators. While the tax preference for owner-occupied housing is problematic for many reasons, it is difficult to ascribe a primary role in the financial crisis for it. Similarly, the leverage of financial institutions appears to have become problematic largely for reasons associated with prudential regulations rather than tax incentives.

III.2. Nonfinancial Corporate Leverage and the Crisis

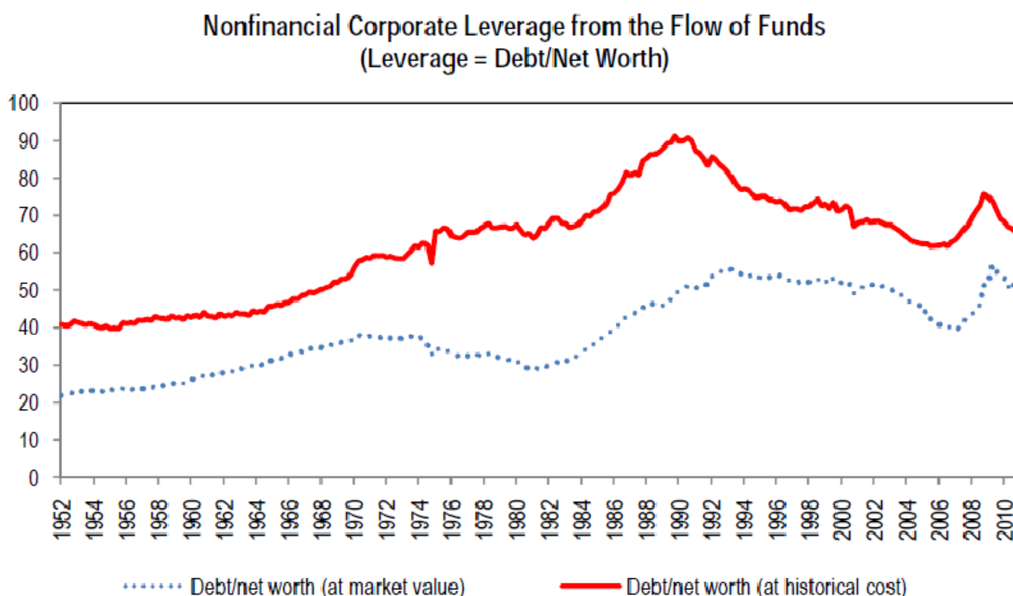
The most promising and relevant role for the tax system in creating current economic difficulties is in contributing to excessive leverage amongst non-financial firms where the debt-bias is thought to exist. Here, however, the evidence is clear. The leverage of the non-financial sector was not a contributing factor to the crisis and, in fact, the remarkable underleverage of the non-financial sector prior to the financial crisis was a saving grace in ensuring that the financial crisis was not nearly as severe as it could have been. The chart below created by my colleague James Zeitler provides the median ratio of net debt (debt minus cash) to assets for non-financial public firms from 1975 to 2010.



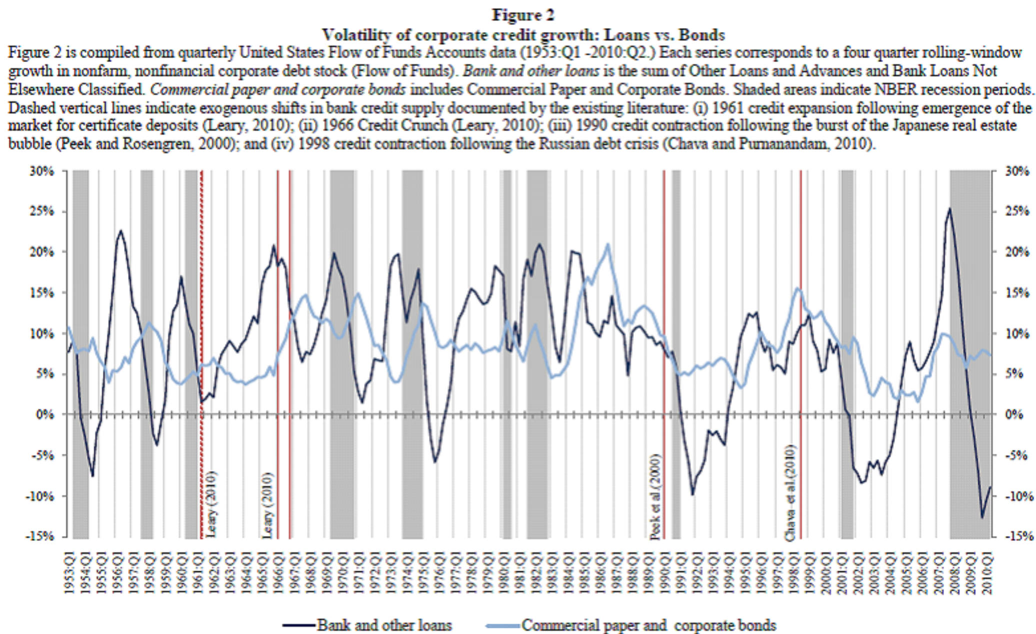
In order to measure leverage accurately, this figure portrays the evolution of debt minus cash as cash held by public corporations is most usefully considered negative debt. The median ratio of gross debt to assets for public corporations demonstrates a similar, though less pronounced, trend downward.

The rising cash balances of public corporations remains a defining feature of corporate finance within the early twenty-first. There are three competing explanations for this rising cash balance and the failure to invest or disgorge this cash – weak demand in product markets, regulatory and macroeconomic uncertainty that forces managers to hoard cash, and a coordination problem whereby managers are frozen into not spending. I have elsewhere proposed that if the third reason is operative, a two percent tax on excess cash balances, coupled with a reform of international tax rules that would allow firms to bring cash home, would help break this coordination problem.

This trend of delivering could be biased because of its focus on public companies or because of the inclusion of cash. In fact, a longer time series from the Federal Reserve's Flow of Funds data that excludes cash and is for all non-financial corporations, provided by my colleague Sam Hanson, verifies that the corporate sector is not highly levered by historic standards.



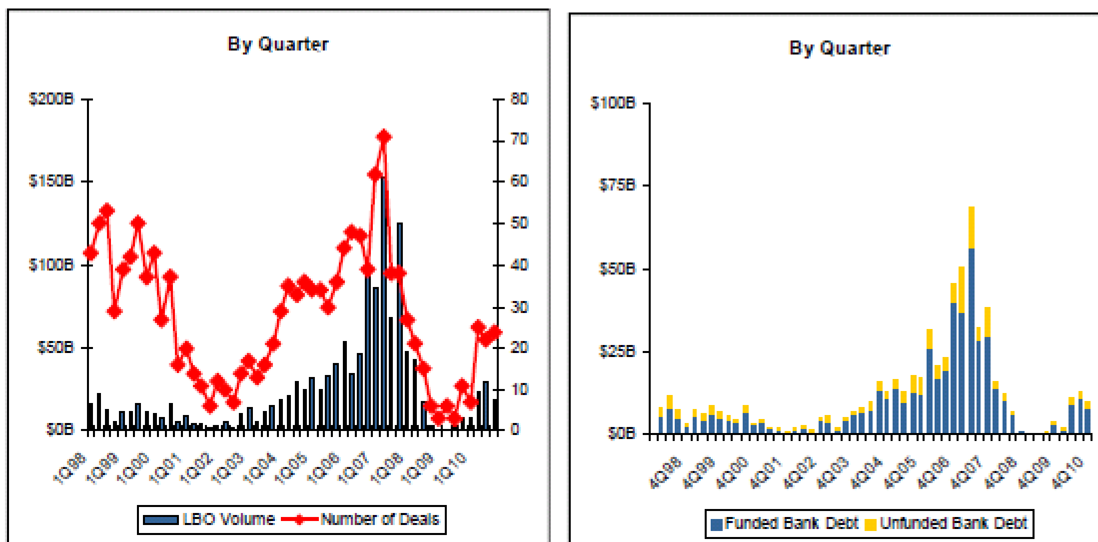
The trend upward in the latter half of 2007 would appear to reflect the onset of the crisis rather than serve as a possible cause of it. Finally, focusing entirely on issuance, my colleagues Bo Becker and Victoria Ivashina have provided this figure of issuance of bank loans, corporate bonds and commercial paper over the last sixty years.



This figure illustrates that average credit growth during the last decade was not extraordinary and that with the exception of lending associated with the private equity boom years of 2006-2007, average lending growth was low relative to other business cycles.

III.3. Private Equity and Leveraged Buyouts

Indeed, the remarkable private equity boom of the mid-2000s may be the source of the perception that non-financial corporate leverage has grown so remarkably. The following two figures, provided by S&P, portray the growth in deal volume and in loan volume for leveraged buyouts.



There was a remarkable growth in leveraged buyout deals, deal sizes, and loan volumes through 2007, though this trend does not appear to have been large enough to move the aggregate figures above. More recently, this trend appears to have revived to a small degree though more recent transactions appear to rely less on debt. The waves of these transactions are hard to tie to tax incentives and more likely represent responses to credit spreads and borrowing rates.

III.4. Conclusions

A remarkable and underappreciated fact about the financial crisis remains that the evaporation of credit was not associated with widespread corporate bankruptcies – a happy outcome that seems to exonerate the debt bias of the tax system for non-financial firms as a major factor in the financial crisis. Indeed, as described above, the reliance on equity financing in aggregate today speaks to the magnitude of the current bias toward any one type of financing.

IV. The Solutions

Perceived problems with the tax treatment of debt and equity are varied. They include economy-wide incentives for excessive reliance on debt finance, favoritism toward firms or transactions (such as leveraged buyouts) where debt is used heavily, and abuses by multinational firms through related party transactions. Of course, each of these concerns are associated with revenue consequences which generate their own interest. And, sometimes, simply the promise of revenue is enough to generate interest, even in the absence of a specific problem.

There are three classes of solutions to these problems of the tax treatment of debt and equity. First, regulatory solutions target behavior deemed excessive and try to curtail that behavior. Second, structural solutions address the underlying problem with significant reforms. Third, rate solutions address the underlying problems but with reforms that dampen the incentives rather than removing them entirely.

IV. 1. Regulatory Reforms

Regulatory solutions take on several forms. First, they can limit deductibility of interest when thresholds of balance sheet leverage ratios or cash flow ratios are exceeded for certain actors. Indeed, earnings-stripping rules such as Section 163 (j) are an example of such an effort with respect to multinational firms and their related parties. Recent proposals that deny deductibility of interest until repatriation are another such example targeted toward multinational firms. Broadening that effort beyond related parties was recently attempted by Germany which has created an "interest barrier" that disallows interest expenses when they exceed certain levels for a firm in aggregate. Similar, more general approaches can include global debt caps so that aggregate leverage cannot exceed predetermined levels.

In order for such approaches to be useful, excessive behavior must be clearly identifiable and regulations must anticipate the inevitable behavioral responses. Such rules may be gamed relatively easily by managers and, as we have learned, the innovative abilities of financial engineers should not be underestimated. Such rules have typically had exemptions for smaller firms, as in the case of Germany, which creates another bright line distinction that can be gamed. In the German case, they limited the interest expense to thirty percent of earnings before interest, taxes and depreciation and amortization. During the crisis, Germany revised the interest barrier as it was viewed as counterproductive during the economic downturn, lifting the exemption level and providing complex carryforward rules for net interest and the earnings against which it is measured. The complexity of such rules should not be underestimated. Moreover, reliance on

such approaches would appear at odds with the current situation where excessive leverage is not a problem in aggregate. Increased tax planning may well be the most easily anticipated reaction to such approaches.

If such rules were to apply to all firms, the treatment of the financial sector and the leasing sector would deserve special attention. Usually, the financial sector is exempt from such rules through specific carve-outs or because excessive interest is measured relative to a net interest margin. Of course, as we've learned, drawing a bright line between financial firms and non-financial firms in creating regulations is a non-trivial exercise. As one example of this, it is difficult to see how leasing firms would be integrated in such schemes without handicapping them considerably.

If one were targeting the leveraged buyout organizational form, one would want to know why this organizational form was worthy of particular note. This form, and the threat of it, offers a powerful antidote to the corporate governance difficulties created by diffuse ownership. There are reasons to question the organizational form – eg. the compensation arrangements of the private equity managers and their mediocre performance relative to reasonable benchmarks – but these presumably should be the concerns of the investors in those funds. In order to consider how the leveraged buyout organizational form would be impacted by such regulations, the chart below, compiled by S&P, provides some average metrics for LBOSs over the last two decades.

Non-Adjusted															
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	4Q10
Debt/EBITDA	5.39	4.93	4.28	4.11	3.50	3.95	4.03	4.31	4.73	4.74	5.62	4.57	3.26	4.25	4.13
Senior Secured Debt/EBITDA	3.90	3.63	3.55	3.19	2.81	3.21	2.99	3.52	4.31	4.18	5.27	3.77	2.86	3.40	3.40
EBITDA/Cash Interest	2.46	2.44	2.77	2.47	3.23	3.79	3.34	3.49	2.78	2.61	2.03	2.46	3.41	2.92	3.04
EBITDA - Mainten. Capex/ Interest	1.94	2.07	1.33	2.09	2.77	3.38	2.98	3.08	2.42	2.11	1.80	2.24	3.17	2.61	2.78
EBITDA - Capex/ Interest	1.76	1.80	2.10	1.90	2.50	3.26	2.85	2.89	2.19	2.02	1.79	2.17	3.17	2.60	2.69

Most generally, it is difficult to understand why one would penalize borrowing when we appear to be going to extreme lengths through other policy instruments to ensure loan demand.

Regulations that would target earnings stripping of multinational firms would, presumably, add to the considerable arsenal of tools that already guard against such abuses including 163 (j) and interest allocation rules. Within the context of the remarkably complex regime for taxing foreign source income, the virtue of additional regulations would have to be weighed against their administrative costs and the degree to which they would make the U.S. a less attractive home for corporations to domicile themselves in.

IV. 2. Structural Reforms

Structural solutions take on the underlying issue either by eliminating entity level taxation via integration or through shareholder remedies such as imputation. Such solutions, in idealized settings, are quite powerful. Economic and administrative realities impinge on their desirability as the presence of foreign shareholders, as highlighted above, and tax exempt shareholders complicate such structural solutions to a large degree. Indeed, various countries with imputation systems have abandoned this approach given the difficulties created by foreign shareholders. More generally, transition issues are non-trivial in this setting as the capitalization of current expected taxes could allow for large windfalls if reforms are not designed appropriately.

Fundamental tax reform in various forms, including corporate cash flow taxes, can address such transition issues and the underlying issue created by entity level taxation. One

variant of particular interest is the Comprehensive Business Income Tax which would change the base of the corporate tax to be all business revenue from the sale of goods or real assets less wages, material costs and depreciation allowances for capital investments. All capital income would be taxed uniformly at the business level. Accordingly, the CBIT tax would remove the distortion to organizational form and financing choices. Finally, adding immediate expensing to the CBIT, along with a wage tax, would transform the tax base to consumption and afford the efficiency gains provided by such transitions.

Modernizing the corporate tax in the absence of fundamental tax reform would usefully focus on several critical dimensions of the current corporate tax rather than the debt-equity distinction. A reform that would preserve the corporate tax in its current form could usefully combine a significant rate reduction with a move toward territoriality and a reduced tolerance for the practice whereby corporations report profits to capital markets and losses to tax authorities. Pervasive examples of firms reporting large profits to capital markets and losses to tax authorities only serves to undercut the general sense of fairness of the income tax. Creating greater so-called book-tax alignment along with taxing the growing share of business income that is not subject to the corporate tax would provide for revenue that could compensate for the lower rates and the shift away from worldwide taxation that the rest of the world has already migrated toward.

IV. 3. Rate Reforms

Rate solutions are modest by comparison but have significant, ancillary benefits. There are many reasons to consider a significant rate reduction on U.S. corporate income. For these purposes, one of the most significant debt related difficulties currently is not excessive leverage in aggregate but with transfer pricing problems and earnings stripping using intrafirm debt, as described above. Reduced corporate rates in the U.S. would reduce the incentive for doing so given the relatively high U.S. statutory rates. The current corporate tax system has the worst of all worlds – high statutory rates and low average rates. Alternatively, relief for equity holders via rate changes can remedy the potential pro-debt bias of the current system.

IV. 4. Conclusions

The appropriate solution will, unsurprisingly, depend very much on the diagnosis of the problem. My perspective on these issues is that regulatory approaches are tempting in idealized settings and are politically salient but are also likely to be ineffective pragmatically and rife with unanticipated consequences. Structural approaches are worth pursuing but some variants of structural approaches are at odds with some important current realities. A step toward fundamental tax reform via a comprehensive business income tax or a corporate tax reform that cuts rates, moves toward territoriality, captures more business income and links definitions of income for tax authorities and capital markets is most desirable. Rate solutions are modest by comparison but provide some supplementary benefits. More generally, given the uncertainty over the magnitude of the current financing bias, it is useful to prioritize the promise of fundamental tax reform or modernizing the corporate tax for current global realities rather than the perceived ills of excessive leverage.