

WOULD A LIMITATION ON BAD DEBT WRITE-OFFS DISCOURAGE HIGH-RISK LOANS?*

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THE DIRECT AND INDIRECT COSTS FROM THE financial crisis of 2008-2009, though below many initial estimates, are substantial and continue to mount. A recent report by the Treasury Department estimates the preliminary losses from the Troubled Asset Relief Program (TARP) at \$50 billion (excludes funds lent to government sponsored entities).¹ The Federal Deposit Insurance Corporation's (FDIC) Deposit Insurance Fund reported losses of \$37 billion for 2008 and \$36 billion for 2009, primarily due to large provisions for insurance losses. In their quarterly conservator's report, the Federal Housing Finance Agency reported that Fannie Mae and Freddie Mac made \$151 billion of total draws under the Treasury Department's Preferred Stock Purchase Program. An agency sensitivity analysis found that cumulative draws through 2013 could range from \$221 to \$363 billion, depending on the time path of future housing prices.²

While analysts have identified a variety of factors as pertinent to the financial crisis, a few seem especially relevant. These include excessive leverage, questionable lending and rating practices, increased interdependence, lack of transparency, and complex financial instruments that were poorly understood. In retrospect, it is clear that the combination of these factors produced significant externalities and increased the systemic risk of the financial system. Recently, Congress enacted the Wall Street Reform and Consumer Financial Protection Act of 2010 to reduce systemic risk and diminish the chance of cascading failures in the financial sector.

In order to recoup the significant outlays made to stabilize the financial system, the President's FY 2011 and FY 2012 budgets propose a new levy on large financial institutions. Referred to as the "Financial Crisis Responsibility Fee," the fee's

description notes that the law which facilitated the TARP also required that the President propose an assessment on the financial sector to recover the associated costs. The proposed fee would be levied on "covered liabilities," defined as total assets less Tier 1 regulatory capital and deposits insured by the FDIC. The fee would apply to all banks, thrifts, bank and thrift holding companies, brokers and security dealers with consolidated assets in excess of \$50 billion as of January 14, 2010. The proposed rate of tax is (approximately) 7.5 basis points with an effective date of January 1, 2013. For the FY 2012 budget, the Treasury Department estimates the fee would generate \$30 billion of new revenues over the ten-year budget window. A recent analysis found that 35 firms would be subject to the new levy and the five largest firms, as measured by covered liabilities, would remit two-thirds of total fees.³

In this paper, we examine a possible alternative to the Financial Crisis Responsibility Fee (FCRF) which utilizes the current infrastructure of the tax system to generate revenues from large financial institutions that place the greatest strain on the financial system through riskier lending practices. These same firms likely benefit most from any implicit guarantees of government support for the financial system (i.e., "too big to fail" firms). Compared to a new fee that requires additional regulatory oversight, the tax system can be a superior mechanism if policymakers want to generate new revenues from large financial institutions. The alternative proposal restricts tax deductions for bad debts which exceed a specified threshold in the computation of net income. To the extent that bad debt deductions reflect firms' lending practices, the proposal should encourage firms to shift loan portfolios towards lower-risk loans. The proposed limitation is set high enough so that the vast majority of firms would be unaffected under normal or even sub-optimal economic conditions, especially smaller firms that generally issue lower-risk loans. Unlike new fees on covered liabilities,

*The views expressed here are solely those of the authors and not the U.S. Department of the Treasury or the Office of Tax Analysis.

the alternative proposal provides incentives for firms to improve the algorithms they use to quantify loan risk. If firms respond to this incentive, then it is possible that the proposal might not only increase revenues to the federal government (either through the explicit denial of certain deductions, or lower reported deductions compared to the current law counterfactual), but might also improve long-term profitability of the financial sector.

The alternative proposal we examine limits the amount of bad debts that can be deducted for tax purposes based on the year from which the bad debt originates. The limit is set relative to the stock of outstanding loans in the bad debt origination year. We consider three limits: 1.25 percent of outstanding loans, 1.50 percent and 1.75 percent. We estimate that if a bad debt limitation had been in place prior to the recent financial crisis and firms had engaged in the same lending practices, then a 1.50 percent limitation would have denied approximately \$211 billion in bad debt deductions claimed during tax years 2010-2014, but generally attributable to loans originating in 2006-2008. Due to this lag, the limitation generally would not deny tax deductions until most firms' balance sheets have recovered from any reduction in economic activity which may have triggered unusually large bad debt write-offs. Furthermore, denied deductions would not immediately increase taxable income for many firms (e.g., firms reporting a tax loss or firms with large stocks of net operating loss carry forwards), thereby increasing the time between the recession's nadir and increased tax burdens. If we assume an effective tax rate of 30 percent and no change in lending behavior, then the 1.50 percent limitation implies increased revenues of approximately \$63 billion. Tax data suggest that roughly three-quarters of additional revenues would have been remitted by the fifteen largest financial institutions as measured by total assets.

We note that this alternative proposal denies legitimate deductions and does not in any sense close a "tax loophole" that is currently exploited by firms. Rather, the proposal we examine merely serves as a possible alternative to the FCRF. In that context, the proposal has three goals: (1) reimburse the public sector for the extraordinary outlays made to stabilize the financial system, (2) reduce overall systemic risk of the financial sector and (3) provide incentives for firms to improve their lending practices.

This paper is divided into five sections. Section 1 presents a simple theoretical model of the loan process and outlines the comparative statics of a limit on the bad debt deduction. Section 2 discusses the data we use for this analysis and provides an historical review of bad debt write-offs. Section 3 presents a simple simulation exercise that applies the proposed bad debt limit to historical tax data. Section 4 provides further discussion of the advantages and disadvantages of a limitation on bad debt deductions. Section 5 concludes with a review of our findings.

DEDUCTIONS FOR WORTHLESS LOANS

When business or residential loans are deemed uncollectible, tax and financial accounting rules allow a deduction of those bad debts in the computation of net income. Loans are classified as bad debts when two conditions are met. First, the loan (in full or part) must be deemed worthless. Second, the loan must be related to a firm's line of business. Under tax rules, worthless loans not related to a firm's line of business are recorded as a capital loss and can only be netted against capital gains. Unused capital losses must generally be carried forward to offset future capital gains. Due to this restriction, capital losses generally have lower net present values compared to write-offs for bad debt, which can be used to offset ordinary income or gains.

The rules that determine worthlessness vary based on the type of loan. Rules are simplest for unsecured consumer debt, where the length of delinquency is the sole criterion for a determination of worthlessness. For other loans, "all pertinent information" must be used to determine whether the debt might be repaid. Relevant factors include debtor-specific information, such as collateral and financial health, as well as macroeconomic factors that might affect the debtor's financial situations, and hence, their ability to repay.

A Simple Model of Bad Debt Write-offs

Because bad debts can be deducted against net income, the tax system implicitly subsidizes riskier lending. To see this outcome, consider a simple stylized model of bank lending. Although this model is static and disregards many important institutional features of the banking industry, it does capture the basic channels through

which bad debt deductions affect overall lending behavior.

Banks raise deposits which they invest in three types of assets: risk-free loans, low-risk loans, and high-risk loans. Deposits are assumed to have a perfectly elastic supply. Denote the amounts invested in each asset as l_f , l_l , and l_h and let d denote total deposits in the bank (for simplicity assume a zero reserve requirement- or think of d as total loanable funds of the bank). The budget constraint of the bank is $d = l_f + l_l + l_h$. Let the rates of return on the three assets be denoted by r_f , r_l , and r_h , respectively. Low-risk loans default with probability p_l and high-risk loans default with probability p_h . For simplicity, assume that if a loan defaults, no principle is recovered. Banks allocate their capital (deposits) among these three assets to maximize expected profits $E(\pi)$. Banks pay taxes, τ , on profits, but are able to deduct the principle lost from loans that default (bad debts). Banks face costs to loaning funds. These costs include administrative costs, risk management costs, and other costs associated with managing a loan portfolio and raising deposits. It is assumed that costs vary by type of loan. Formally:

$$(1.1) \quad \max_{\{l_f, l_l, l_h\}} E(\pi) = (1-\tau)[l_f r_f + (1-p_l)r_l l_l + (1-p_h)r_h l_h] - (1-\tau)[p_l l_l + p_h l_h] - c(l_f, l_l, l_h),$$

subject to:

$$(1.2) \quad d = l_f + l_l + l_h$$

The necessary conditions of the bank's problem are:

$$(1.3) \quad \frac{\partial E(\pi)}{\partial l_f}: (1-\tau)r_f = c_{l_f}(l_f, l_l, l_h)$$

$$(1.4) \quad \frac{\partial E(\pi)}{\partial l_l}: (1-\tau)p_l r_l - (1-\tau)p_l = c_{l_l}(l_f, l_l, l_h)$$

$$(1.5) \quad \frac{\partial E(\pi)}{\partial l_h}: (1-\tau)p_h r_h - (1-\tau)p_h = c_{l_h}(l_f, l_l, l_h)$$

These conditions show that banks invest in risk-free, low-, and high-risk loans until the expected, after-tax return equals the marginal cost to issue each type of loan. Notice that in Equations 1.4 and

1.5, the ability to deduct bad debts causes the ratio of after-tax to before-tax returns from risky loans to be the same as that of risk-free loans.

Proposal – Limitation on Write-offs for Bad Debts

To provide incentives for firms to improve their lending algorithms and issue less risky loans while also generating additional tax receipts to the government, the proposal limits the amount of bad debt that firms can deduct for tax purposes in a given tax year. The limitation applies to the amount of bad debt a firm can deduct over time based on two parameters: (1) the year from which the bad debt originates and (2) the stock of outstanding loans for the same year. For example, loans originating in 2007 might comprise one-fifth of all outstanding loans for that year. If a firm eventually writes-off ten percent of loans originating in 2007, then it will have written-off two percent of loans outstanding as of the end of that year. If the bad debt limitation for loans originating in 2007 is set at one percent of outstanding loans for that year, then one-half of bad debt deductions would be disallowed in future years.

Overall, the proposal discourages higher-risk loans but does not reduce the incentive to make lower-risk loans. (In fact, the quantity of low-risk loans might be expected to increase.) To see this outcome, consider the simple model presented above with a limit on bad debt as a percentage of total loans. Let λ denote the Lagrangian multiplier on the bad debt limitation and α represent the percentage of total loans that can be expensed. With the limitation, the objective function of the firm becomes:

$$(1.6) \quad \max_{\{l_f, l_l, l_h\}} E(\pi) = (1-\tau)[l_f r_f + (1-p_l)r_l l_l + (1-p_h)r_h l_h] - (1-\tau)[p_l l_l + p_h l_h] - c(l_f, l_l, l_h) + \lambda[\alpha(l_f + l_l + l_h) - (p_l l_l + p_h l_h)],$$

subject to:

$$(1.7) \quad d = l_f + l_l + l_h$$

The necessary conditions are as follows:

$$(1.8) \quad \frac{\partial E(\pi)}{\partial l_f}: (1-\tau)r_f = c_{l_f}(l_f, l_l, l_h)$$

$$(1.9) \quad \frac{\partial E(\pi)}{\partial l_i}: (1-\tau)p_i r_i - (1-\tau)p_i + \lambda(\alpha - p_i) \\ = c_{l_i}(l_f, l_i, l_h)$$

$$(1.10) \quad \frac{\partial E(\pi)}{\partial l_h}: (1-\tau)p_h r_h - (1-\tau)p_h + \lambda(\alpha - p_h) \\ = c_{l_h}(l_f, l_i, l_h)$$

Firms issue loans until the expected, after-tax return from each type of loan equals the marginal cost of providing the loan. Under the bad debt limitation, there is an additional cost to exceeding the deductibility limit, represented by Lagrangian multiplier, λ , on the binding constraint. The constraint bites only when $\alpha > p_i$ and the expected average default rate of the overall portfolio is at or near the limit. The constraint decreases bank lending where the probability of default (or expected loss) is greater than the deductibility limit, but not otherwise. For example if $\alpha = 2\%$, then a firm reduces those loans where $p_i > 0.02$ if the average default rate for all loans is near the limit. The firm would prefer to issue loans below the limit to lower the average default rate and reduce the chance that future write-offs might be denied.

A limitation of this form has several desirable features. Most importantly, it reduces only the quantity of loans where the probability of default exceeds the limitation. Thus, the policy discourages riskier lending at the margin, but does not discourage low-risk lending. Moreover, firms still choose the composition of loans they make. Aside from borrowers, loan originators have the most complete information regarding the probability of future loan default. By imposing a relative limitation on bad debt write-offs, the tax authority need only set the level of risk (i.e., the charge-off rate limit) it deems necessary to accomplish its objective. Faced with that limit, firms determine the likelihood that a given loan will default and potentially be non-deductible at the margin.

A limitation on bad debt write-offs could also be set relative to the dollar amount of new loans that originate in a given year as opposed to the total stock outstanding at the end of the year. We use the latter approach because we do not have data regarding the dollar amount of new loans by year of origination. More important is that the limitation is a function of the stock of loans from

a prior tax year so as not to encourage inefficient lending behavior. For example, if the bad debt limitation in year t is set as a percentage of total loans outstanding for that year, firms might have an incentive to increase loan volume in a year with unusually high default rates on loans made in the past. A limitation based on the current loan portfolio would also favor rapidly expanding firms over ones that expand at a more moderate pace.

Data and Simulation Results

We use two data sources for this analysis; annual corporate income tax returns compiled by the Internal Revenue Service's (IRS) Statistics of Income Division (SOI) and quarterly call reports filed by financial institutions with the FDIC. From tax returns, we use amounts reported for bad debts (line 15, corporate income tax form 1120) and set total loans equal to the sum of mortgage and real estate loans and trade notes and accounts receivable (Schedule L, lines 8 and 2a). We restrict our analysis to C corporations that report the following NAICs: commercial banks (code 522110), savings institutions (522120), and bank holding companies (551111).

Although we rely on tax data for most of our analysis, the dollar amount of bad debt write-offs and ratio of bad debt write-offs to outstanding loans is very similar using tax and FDIC data. This likeness occurs because tax law defers to the rules of the relevant regulatory agency such as the Office of the Comptroller of the Currency (OCC) the Board of Governors of the Federal Reserve System (FRB), or the Federal Deposit Insurance Corporation (FDIC)). In general, if a bad loan is approved by regulatory authorities, then that treatment will also be upheld for tax purposes. Figure 1 displays aggregate bad debt write-offs as reported by financial institutions on tax returns and call reports filed with the FDIC for 1988-2010. Both data sources show that nominal bad debt write-offs increased moderately during the 2001 recession but increased dramatically during the recent financial crisis. Preliminary tax data suggest that bad debt write-offs for financial institutions equaled \$227 billion for 2009. Tax data are not yet available for 2010, so we rely on FDIC data for that year. FDIC data show that the dollar amount of charge-offs for calendar year 2010 increased slightly (2.5 percent) relative to 2009. For the purposes

Figure 1: **Bad Debt Write-offs and Charge-offs**

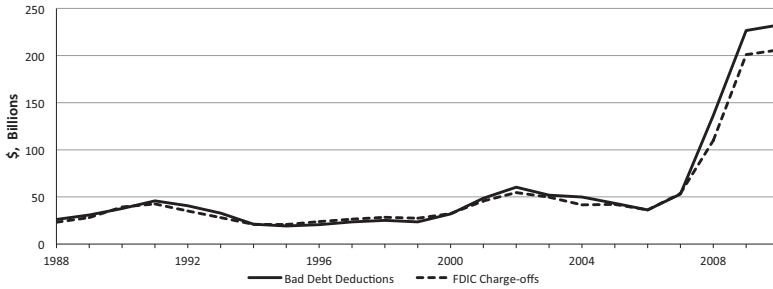
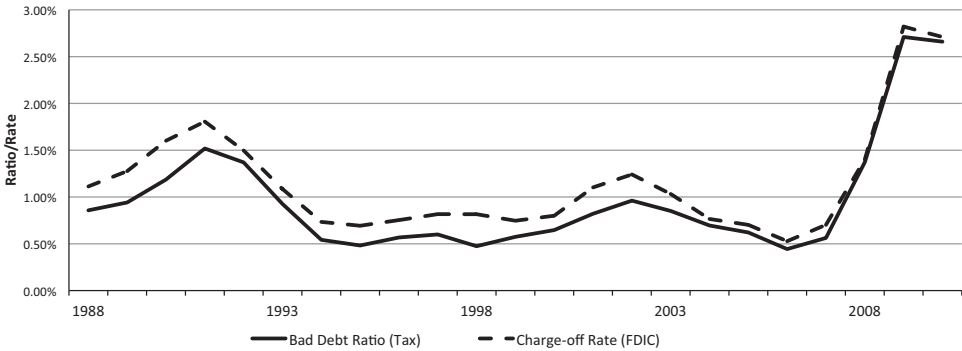


Figure 2: **Bad Debt Ratio and Charge-off Rate**



of this analysis, we assume that bad debt write-offs for tax purposes will increase by a similar magnitude.

Figure 2 shows the ratio of bad debt write-offs to same year loan stock for 1988-2010 using tax data and FDIC call reports. For non-recession years, the ratio of loans written-off to the stock of outstanding loans is typically less than one percent. For 1993-2001, bad debt write-offs averaged 0.63 percent (tax data) and 0.84 percent (FDIC reports) of year-end loans. For 2003-2007, the respective averages were 0.63 and 0.75. As shown by Figure 2, write-off ratios were much higher during the recent financial crisis: 1.4 percent for 2008, and 2.7 percent for 2009-10.

Ranked by total assets, large financial institutions generally report much higher ratios of bad debt write-offs relative to outstanding loans. Table 1 shows total bad debt deductions and bad debt to outstanding loan ratios by asset class for tax years

2004, 2006, and 2008. Tax year 2004 (bad debt to loan ratio of 0.7 percent) is a fairly typical ratio, while 2006 has an exceptionally low ratio and 2008 is relatively high. Regardless of the year, the largest banks generally report a ratio approximately two to three times higher than firms reporting less than \$100 million of assets. Larger banks are thought to have disproportionately benefitted from the government intervention in the recent financial crisis (Morgenson, 2009), thus proposals to recoup losses from the financial sector often target large institutions. Given the historical ratio of bad debt deductions to same year loans, it appears that a relative limitation on bad debt write-offs would generally impact very large firms, and only in years following widespread defaults. Historical data suggest that small financial institutions, such as community banks, would be unaffected by a limitation on bad debt write-offs equal to one percent (or more) of loans.

Table 1
Bad Debt Write-offs by Bank Size
 tax years, billions of dollars

	2004			2006			2008		
	Number Firms	Bad Debt Deduction	Write-off Ratio ¹	Number Firms	Bad Debt Deduction	Write-off Ratio ¹	Number Firms	Bad Debt Deduction	Write-off Ratio ¹
<\$100 million ²	2,318	0.2	0.28%	1,910	0.1	0.19%	1,627	0.3	0.44%
\$100 million - \$500 million	2,456	0.8	0.22%	2,305	0.6	0.15%	2,269	2.4	0.62%
\$500 million - \$1 billion	424	0.4	0.23%	494	0.3	0.15%	498	1.7	0.69%
\$1 billion - \$10 billion	371	1.3	0.21%	420	1.2	0.16%	448	8.6	1.09%
\$10 billion - \$50 billion	47	2.1	0.35%	49	1.1	0.19%	49	6.7	1.17%
>\$50 billion	28	40.5	0.87%	31	32.3	0.53%	34	112.1	1.52%
Total	5,644	45.3	0.70%	5,209	35.6	0.44%	4,926	131.8	1.40%

Notes:

¹ Equal to bad debt deduction divided by loans outstanding as end of year.

² Excludes firms that do not report dollar amount of loans, such as certain foreign-owned banks.

Source: Statistics of Income Corporate Income Tax Return sample for tax years 2004, 2006, and 2008.

LIMITATION ON BAD DEBT WRITE-OFFS

In this section, we examine outcomes if a bad debt limitation had been in place during the recent financial crisis. For illustrative purposes, we consider three potential limits on bad debt write-offs relative to the stock of outstanding loans in the bad loan origination year: a 1.25 percent limit, a 1.50 percent limit, and a 1.75 percent limit. For the purposes of this simple analysis, we assume that a limit would not affect historical lending practices. In reality, a limit would likely have reduced risky loans and fewer bad debt write-offs would have been denied under the proposal. Regardless of whether bad debt write-offs are denied or firms issue fewer risky loans which eventually default, both outcomes would reduce tax deductions and increase revenues to the federal government. Finally, we note that if firms adjusted their loan portfolios in response to a limit on bad debt, it would likely alter their profitability. For this static analysis, we do not attempt to quantify that impact. It is possible that a limitation could increase or decrease firms' after-tax profitability.

We performed our simulation using tax and FDIC data and obtain very similar results. We present results using tax data since it is those deductions that the limitation seeks to restrict. The proposal limits bad debt write-offs based on the origination year. For example, one of the limits we consider would limit bad debt write-offs from loans originated in 2007 to 1.50 percent of loans outstanding for the same year. Firms might claim write-offs for bad loans originating in 2007 during tax years 2008 through 2010, and then hit the limitation in tax year 2011.

Because we base the limitation on the loan origination year, we must make assumptions regarding the vintage of loans that comprise bad debts claimed in a given tax year. Firms generally do not report these data in their financial reports. For the purposes of our simulation, we base bad loan vintages on data reported by Fannie Mae and Freddie Mac while under conservatorship status.⁴ We use two vintages from these reports. For bad debt write-offs reported for tax years 2008-2009, we assume the following vintages: two percent are from loans made in the same year, 20 percent from t-1, 30 percent from t-2, 25 percent from t-3, 15 percent from t-4, five percent from t-5 and three percent from t-6. For all other years, we assume the following vintages: five percent from year t-1, ten

percent from t-2, 30 percent from t-3, 30 percent from t-4, 20 percent from t-5 and 5 percent from t-6. Although these vintages are only approximations and will not hold for all financial institutions, we find that our results are generally robust as long as the majority of bad debt write-offs are attributable to loans made during the prior four tax years from when the bad debt deduction was claimed.

Finally, we must also make assumptions regarding the time path of future bad debt write-offs and loans for 2010-2015. For 2010, we use growth rates reported by firms in their quarterly call reports. For 2011-2015, we extrapolate aggregate loans using GDP projections from the Administration's macro assumptions for the FY 2012 Budget of the President (approximately 4.5 percent growth per annum). We further assume that the ratio of bad debt write-offs to current year outstanding loans reverts to an historical steady state level from the very high level of 2.7 percent for 2010: 1.7 percent in 2011, 1.2 percent in 2012, 0.9 percent in 2013 and 0.8 percent for 2014-15.

Table 2 presents results for the three limitations we examine. Using a 1.25 percent bad debt limit, we find that \$302 billion of bad debt write-offs would have been denied, assuming firms did not alter their lending practices in response to the limit. Given our vintage assumptions, loans originated in 2005-2009 are affected, reducing projected tax deductions claimed in 2010-2014. Under a 1.50 percent limit, denied write-offs fall to \$211 billion, affecting loans originated in 2006-2009 and tax deductions claimed for tax years 2010-2014. Under a 1.75 percent limit, denied write-offs fall to \$129 billion, affecting loans originated in 2006-2008 and tax deductions claimed in 2010-2014. Assuming a 30 percent effective tax rate implies that the 1.50 percent limitation could have increased tax receipts by approximately \$63 billion through the explicit denial of deductions or changes in loan portfolio that result in fewer deductions claimed.

Regardless of the limitation, the tax implications of denied deductions would likely not materialize for several years. For example, under the 1.50 percent limit, the static simulation suggests that \$211 billion of deductions would have been denied: \$70 billion claimed in tax year 2010, \$83 billion in tax year 2011, \$33 billion in 2012, \$21 billion in 2013, and \$4 billion in 2014. Although tax data are not yet available for 2010, tax data for 2009 show that slightly more than half of bad

Table 2
Tax Years, Billions of Dollars

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-15
Total Bad Debt, Tax Year Claimed ¹	45	42	35	51	131	218	223	155	115	85	80	85	1,266
Using a 1.25% Limitation													
Deductions Denied: Origination Year	0	33	101	113	49	5	0	0	0	0	0	0	302
Deductions Denied: Tax Year Claimed	0	0	0	0	0	0	132	83	57	21	9	0	302
Using a 1.50% Limitation													
Deductions Denied: Origination Year	0	0	15	81	89	26	0	0	0	0	0	0	211
Deductions Denied: Tax Year Claimed	0	0	0	0	0	0	70	83	33	21	4	0	211
Using a 1.75% Limitation													
Deductions Denied: Origination Year	0	0	62	66	2	0	0	0	0	0	0	0	129
Deductions Denied: Tax Year Claimed	0	0	0	0	0	0	26	69	29	4	2	0	129

¹ Includes only firms reporting at least \$100 million of total assets.

debt deductions claimed by very large firms most likely to be affected by a bad debt limit did not immediately reduce tax liability. At the margin, the denied deductions did not effectively offset taxable income because the firm reported a tax loss or had ample unused net operating loss carryforwards to offset any increases to taxable income if bad debt deductions had been denied.

Under all limitations, the vast majority of disallowed deductions are reported by the very largest firms as measured by total assets. For example, preliminary tax data suggest that firms reporting more than \$50 billion of total assets had an average write-off to current-year loan ratio of 3.5 percent for tax year 2009. Those firms report reported more than 85 percent of bad debt deductions for that year. By comparison, the average write-off ratio for firms with less than \$100 million of total assets was still below one percent for tax year 2009.

DISCUSSION

The limitation on bad debt expenses has several advantages compared to a new levy on covered liabilities. A limitation on bad debt deductions as a percentage of total loans reduces riskier lending, but does not have a negative impact on relatively low-risk lending. This outcome contrasts other proposals targeting the financial sector such as a tax on bank assets like that analyzed by Sheppard and Sullivan (2010). Consider a tax on bank assets in the simple model from earlier in this paper. In this setting, lending of all types decreases as the tax on assets increases the after-tax cost of loans. If a measure of risk-weighted assets were used, some targeting of high-risk loans could be achieved. However, a risk-weighted asset approach has the additional cost of requiring coordination between regulatory authorities and the IRS. It also relies on ratings agencies that may or may not provide accurate assessments of different assets relative risk. In contrast, a limitation on bad debt uses tax concepts and allows firms to evaluate the riskiness of loans they hold. The limitation causes minimal interference with the firm's profit optimization decision and gives firms additional incentives to improve the risk management algorithms used for their loan portfolios. The "penalty", in terms of the denied deduction, is a direct function of actual outcomes and practices; the actual amount of loans written off. Finally, the proposal has potential to

raise significant revenue from the financial sector, with the burden disproportionately falling on larger firms. Such firms are thought to have benefitted most from public sector involvement in the financial system.

However, there are several potential drawbacks to a bad debt limitation. First, it is possible that a limit might induce behavior due to the limitation applying to bad debt but not capital losses. Firms might take actions to re-characterize bad debt expenses as capital losses. For example, a limitation might result in a greater volume of asset backed securities, which can make loan renegotiation more difficult and decrease transparency in the financial system (Mian and Sufi, 2009; Keys, Mukherjee, Seru and Vig, 2010; Piskorski, Seru and Vig, 2010). In addition, the proposed FCRF applied only to C corporation banks. Given that constraint, a bad debt limit might cause firms to shift loans onto the balance sheets of controlled partnerships. The partnership could deduct the bad debt losses and pass the loss through to the bank and the bank would effectively retain control of the loans. In this case, the behavioral and revenue effects of the proposal would be smaller than we would otherwise anticipate. A second drawback is that the IRS would need additional information on loan vintages. Although firms already track loan vintages, a bad debt limit would require additional reporting for tax purposes which would impose some additional burden on firms. Third, the denial of bad debt write-offs violates traditional income tax principles. However, denials might be defensible if it counteracts a negative externality or if certain types of firms benefit disproportionately (e.g., very large firms).

CONCLUSION

In this paper, we examine a limitation on bad debt write-offs as a potential alternative to the FCRF proposed by the administration. Both proposals generate additional revenues from very large financial institutions. While the FCRF explicitly targets large firms based on their reported total assets, the proposed limit on bad debt affects those same firms because they have historically engaged in riskier lending practices. Using a simple static simulation exercise, we find that a 1.50 percent limit on bad debt write-offs would have denied approximately \$211 billion of bad debt deduc-

tions claimed for tax years 2010-2014. Assuming an effective tax rate of 30 percent implies roughly \$63 billion of additional tax revenue if firms did not change their lending behavior in response to the limit. Nearly the entire additional tax burden falls on very large firms that reported extraordinarily large write-offs. Although such conditions are unlikely to occur again during the ten-year budget window, a limitation such as the ones we examine should provide incentives for firms to improve the algorithms used to assess and issue loans. Hence, even if the proposed limitation did not explicitly deny future deductions, we would expect that bad debt write-offs would decline relative to the current law counterfactual.

Notes

- ¹ See *Troubled Asset Relief Program: Two Year Retrospective* (October 2010) for the full report on the status of the TARP.
- ² Conservator's Report on the Enterprises' Financial Performance, Third Quarter 2010, Federal Housing Finance Agency. News Release, October 21, 2010, FHFA Releases Projections Showing Range of Potential Draws for Fannie Mae and Freddie Mac.
- ³ Martin Sullivan. "Estimating the Obama Bank Tax," Tax Notes, February 1, 2010, pages 561-564.

- ⁴ These data are reported in the credit supplement to the quarterly financial reports.

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