The Macroeconomic Impact of Dodd Frank—and of Its Repeal

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The 2010 Dodd–Frank Wall Street Reform and Consumer Protection Act spawned approximately 400 separate rulemakings across the financial sector and was the most extensive financial regulatory bill since the 1930s.[1] It expanded the authority of existing federal regulators, created new federal agencies, and dramatically altered the regulatory framework for several distinct financial sectors.[2] Critics have argued that the Dodd–Frank Act failed to adequately address the causes of the 2008 financial crisis, imposed unnecessarily high compliance burdens on firms, worsened the too-big-to-fail problem, and contributed to the unusually sluggish recovery.[3]

Several researchers have estimated the firm-level impact of Dodd–Frank. For instance, one study estimates the change in commercial banks' noninterest expenses following the Dodd–Frank Act;[4] another estimates the number of full-time-equivalent compliance jobs required to comply with Dodd–Frank.[5] Similarly, researchers at the Minneapolis Federal Reserve estimate that the cost of increased regulation could have decreased community banks' return on assets by between 12 and 14 basis points,[6] and economists at the Mercatus Center present survey results for the compliance efforts of banks with less than $10 billion.[7] This Heritage Foundation *Issue*

Brief, in contrast, examines the macroeconomic effects related to Dodd–Frank.

Dodd–Frank and the Economy

Perhaps due to the diverse aspects of Dodd–Frank, very few researchers have published estimates of macroeconomic effects related to the act.[8] The act altered, for example, regulations in securities markets, banking, derivatives markets, and nonbank consumer loans. It required regulators to identify systemically important financial institutions and treat them differently, with potential repercussions on the frequency and severity of future recessions. The wide variety of data sources needed, along with the ongoing nature of implementing these regulations, makes it very difficult to quantify the overall impact of Dodd–Frank.

Ideally, a macroeconomic analysis or dynamic budget score of the repeal of the Dodd–Frank Act would rely on microeconomic evidence and theory to guide the incorporation of a handful of key components into a macroeconomic model with a richly modeled financial sector. This *Issue Brief* does not attempt to be a full analysis; rather, it takes a first step to show that such analysis is worth pursuing and possible to perform.

For this report, we used a standard macroeconomic model to quantify the benefits of reducing one of the likely effects of Dodd–Frank: excess borrowing costs. We did not attempt to model the financial sector or the uncertain impacts of Dodd–Frank on potential future recessions. Our results are intended to provoke a scholarly conversation, not to conclude one.

We model Dodd–Frank as an "investment wedge"—a gap between the interest rate paid by bor-

rowers and that received by lenders. In macroeconomics, various wedges are used to introduce distortions into a model economy. For example, tax, labor, and productivity wedges are frequently used to estimate the impact that various policy changes might have on the economy.[9]

Our choice to use this wedge relies on research, cited above, which finds microeconomic evidence that financial intermediation has been made more costly by the new regulations. The microeconomic evidence does not, however, give a precise estimate of the size of the wedge.

Following an approach used by economists Philippe Bachetta and Stefan Gerlach,[10] we estimate the investment wedge using data on the difference (the spread) between the bank prime lending rate and the rate on 90-day certificates of deposit (CDs).

Our estimate is generated by employing a dummy-variable regression on monthly U.S. data from January 2000 through February 2017, excluding 2007 and 2008.[11] A dummy variable, set to 1 for all periods beginning in 2011, represents the change in the wedge due to Dodd–Frank. Using this procedure, the data show that the spread between the bank prime lending rate and the 90-day CD rate increased approximately 22 basis points. That is, after Dodd–Frank implementation began, the spread was 22 basis points higher than it was from 2000 to 2006. (See Table 1.)

Our estimate may overestimate or underestimate the effects of Dodd–Frank. We show macroeconomic results for a 22-basis-point wedge and also for a 10-basis-point wedge.

Macroeconomic Effects of Repealing Dodd–Frank

Using the Open Source Policy Center's OG-USA open-economy model of the U.S. economy, we

1. Ayesha Javed, "Six Years On, 30% of Dodd–Frank Rules Yet to Be Finalized," Bloomberg, July 28, 2016, https://www.bloomberg.com/enterprise/blog/six-years-30-dodd-frank-rules-yet-finalized/ (accessed March 10, 2017).

2. For a title-by-title examination of Dodd–Frank, see Norbert J. Michel, ed., *The Case Against Dodd–Frank: How the "Consumer Protection" Law Endangers Americans* (Washington, DC: The Heritage Foundation, 2016), http://thf-reports.s3.amazonaws.com/2016/The%20Case%20Against%20Dodd-Frank.pdf.

3. Peter Wallison, "Why Large Portions of the Dodd–Frank Act Should Be Repealed or Replaced," in Michel, ed., *The Case Against Dodd–Frank: How the "Consumer Protection" Law Endangers Americans.*

4. Thomas L. Hogan and Scott Burns, "The Impact of Dodd-Frank on Banks' Noninterest Expenses," SSRN, March 14, 2017.

5. James R. Barth, Apanard (Penny) Prabha, and Clas Wihlborg, "The Dodd–Frank Act: Key Features, Implementation Progress, and Financial System Impact," The Milken Institute, February 2015, file:///C:/Users/micheln/Downloads/The%20Dodd-Frank%20Act-%20Key%20Features%20Implementation%20Progress%20(1).pdf (accessed March 10, 2017).

6. Ron Feldman, Ken Heinecke, and Jason Schmidt, "Quantifying the Cost of Additional Regulation on Community Banks," Federal Reserve Bank of Minneapolis, *Economic Policy Paper* No. 13-3, May 30, 2013, https://www.minneapolisfed.org/research/economic-policy-papers/quantifying-the-costs-of-additional-regulation-on-community-banks (accessed March 10, 2017). These figures refer to the average basis-point impact across all sizes of community banks reported in Tables 3 and 5, respectively.

7. Hester Peirce, Ian Robinson, and Thomas Stratmann, "How Are Small Banks Faring under Dodd-Frank?" Mercatus Center George at George Mason University, February 27, 2014, https://www.mercatus.org/publication/how-are-small-banks-faring-under-dodd-frank (accessed March 10, 2017).

8. For examples, see Nahid Kalbasi Anaraki, "Does Dodd Frank Act Affect Macroeconomic Variables?" *Journal of Global Economy*, Vol. 12, No. 2 (2016), and Viral V. Acharya, "The Dodd-Frank Act and Basel III: Intentions, Unintended Consequences, and Lessons for Emerging Markets," Asian Development Bank Institute *Working Paper* No. 392, October 28, 2012, https://ssrn.com/abstract=2168006 (accessed March 31, 2017).

9. For an example of the heavy use of wedges in modeling, see V. V. Chari, Patrick Kehoe, and Ellen McGrattan, "Business Cycle Accounting," *Econometrica*, Vol. 75, No. 3, May (2007), pp. 781–836, http://users.econ.umn.edu/~pkehoe/papers/CKMeconometrica2007.pdf (accessed March 10, 2017).

10. This approach is used in Philippe Bacchetta and Stefan Gerlach, "Consumption and Credit Constraints: International Evidence," *Journal of Monetary Economics*, Vol. 40 (1997), pp. 207–238. The authors also used Treasury bill rates as a deposit rate (instead of CD rates) to derive an alternate estimate of the wedge. This Heritage *Issue Brief* estimates the alternative wedge, too, and the results are immaterially different from those presented.

11. All data used in this *Issue Brief* are available via the Federal Reserve Economic Data (FRED) website. The variables used are as follows: Bank Prime Loan Rate, Percent, Monthly, Not Seasonally Adjusted; and 3-Month or 90-day Rates and Yields: Certificates of Deposit for the United States©, Percent, Monthly, Not Seasonally Adjusted. A linear trend is also included in the regression, and using a simple dummy-variable adjustment for seasonality does not materially change the results presented in this *Issue Brief*.

found that removing a 22-basis-point investment wedge associated with Dodd–Frank would increase U.S. income by 1.38 percent in 2026, with an annual average increase of 1.01 percent from 2017 to 2026. The closed-economy version—which assumes no trade or foreign investment—shows a smaller impact, a 0.35 percent increase in income in 2026, with an annual average increase of 0.19 percent from 2017 to 2026.

Removing an 11-basis-point wedge results in proportionately smaller effects.

The full results are reported in Table 2. Wages increase a bit more than total income in each case, and the strongest response is in the size of the capital stock.

The closed-economy model is probably more realistic than the open-economy model in describing the pattern of adjustment in the short run, although it is less helpful in estimating the size of the long-run adjustment. The open-economy model adjusts as quickly as modelers allow it,[12] but the closed-economy adjusts gradually, since the economy takes time to generate more physical investments to take advantage of the lower borrowing rates.

In the closed-economy framework, the economy achieves as much income growth above baseline in the first seven years as it does in the subsequent 12 years.

Budgetary Effects

The OG-USA model adjusts tax revenue automatically, but holds government spending at baseline levels. Thus, the growth leads to a decline in the federal debt ratio of 1.5 percent in 2026, with an annual average decline of approximately 1 percent from 2017 to 2026. The OG-USA model does not yet model federal interest spending or central bank policy realistically, thus we do not report the budgetary benefits of lower interest spending.

As Table 3 shows, the model estimates between $64 billion and $340 billion in 10-year revenue gains from removing an investment wedge.[13] Over a 20-year horizon, the revenue gains are between $202 billion and $817 billion. To maximize comparability

TABLE 1

Regression Estimate of Investment Wedge

	Coefficient	SE	P-Value
Constant	4.2491	0.2100	0.0000
Trend	-0.0022	0.0004	0.0000
Wedge	0.2229	0.0465	0.0000

Number of observations: 182

NOTES: Results are from an ordinary least-squares regression, where the dependent variable is the spread between the bank prime lending rate and the rate on 90–day certificates of deposit. The regression uses monthly U.S. data from January 2000 through February 2017, excluding 2007 and 2008. The trend variable is a simple linear trend. The wedge variable is a dummy set to one for all periods beginning in 2011.
SOURCE: Heritage Foundation calculations based on data from Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/ (accessed April 5, 2017). Variables include the Bank Prime Loan Rate, Percent, Monthly, Not Seasonally Adjusted, and the 3–Month or 90–Day Rates and Yields on U.S. Certificates of Deposit, Percent, Monthly, Not Seasonally Adjusted.

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with other budget estimates, we adopted Congressional Budget Office estimates of baseline federal revenue.[14]

Perhaps un-intuitively, the revenue gains are larger in the closed-economy model, even though national income grows much more rapidly in the open-economy model. In the closed-economy, the immediate impact of the removal of the wedge is a large increase in capital income, which is taxed at high rates in the U.S. (in fact, it is double taxed). As the economy expands the supply of capital in response to the lower wedge, the return falls, but it remains higher than baseline even in the long run. In an open economy, by contrast, the return on capital is set in global markets, and the removal of an investment wedge does not raise taxable income for U.S.-based investors.

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12. We removed the investment wedge gradually in the open-economy case.

13. Following Congressional Budget Office conventions, these figures are adjusted neither for inflation nor expressed in net present value terms.

14. Congressional Budget Office, *The Budget and Economic Outlook: 2017–2027*, January 24, 2017, https://www.cbo.gov/publication/52370 (accessed March 27, 2017).

TABLE 2

Summary of Economic Impact of Removing an Investment Wedge

WEDGE = 22 BASIS POINTS		2017	2018	2019	2020	2026	Avg., 2017–2026	Avg., 2027–2036
Closed Economy	GDP	0.00%	0.05%	0.10%	0.14%	0.35%	0.19%	0.48%
	Consumption	0.02%	0.12%	0.21%	0.29%	0.63%	0.37%	0.81%
	Capital stock	0.00%	0.21%	0.40%	0.57%	1.34%	0.75%	1.80%
	Wage	0.00%	0.09%	0.16%	0.23%	0.53%	0.30%	0.71%
	Federal revenue	1.17%	1.15%	1.13%	1.11%	1.04%	1.10%	0.99%
	Federal debt ratio	0.00%	–0.08%	–0.16%	–0.25%	–0.78%	–0.38%	–1.30%
Open Economy	GDP	–0.33%	0.17%	0.66%	1.07%	1.38%	1.01%	1.31%
	Consumption	0.41%	0.44%	0.47%	0.51%	0.70%	0.56%	0.79%
	Capital stock	–0.33%	0.81%	1.97%	2.94%	3.82%	2.86%	3.75%
	Wage	0.00%	0.35%	0.70%	0.99%	1.29%	0.98%	1.29%
	Federal revenue	–0.35%	–0.09%	0.17%	0.39%	0.59%	0.38%	0.57%
	Federal debt ratio	0.00%	–0.24%	–0.50%	–0.75%	–1.50%	–0.90%	–2.19%

WEDGE = 11 BASIS POINTS		2017	2018	2019	2020	2026	Avg., 2017–2026	Avg., 2027–2036
Closed Economy	GDP	0.00%	0.03%	0.05%	0.07%	0.17%	0.10%	0.24%
	Consumption	0.01%	0.06%	0.10%	0.14%	0.32%	0.18%	0.40%
	Capital stock	0.00%	0.10%	0.20%	0.29%	0.67%	0.37%	0.90%
	Wage	0.00%	0.04%	0.08%	0.12%	0.27%	0.15%	0.35%
	Federal revenue	0.59%	0.58%	0.57%	0.56%	0.52%	0.55%	0.50%
	Federal debt ratio	0.00%	–0.04%	–0.08%	–0.13%	–0.39%	–0.19%	–0.66%
Open Economy	GDP	–0.17%	0.08%	0.33%	0.58%	0.69%	0.51%	0.66%
	Consumption	0.21%	0.22%	0.24%	0.26%	0.35%	0.28%	0.40%
	Capital stock	–0.17%	0.41%	0.99%	1.57%	1.90%	1.44%	1.87%
	Wage	0.00%	0.17%	0.35%	0.53%	0.65%	0.49%	0.65%
	Federal revenue	–0.18%	–0.05%	0.08%	0.22%	0.30%	0.19%	0.29%
	Federal debt ratio	0.00%	–0.12%	–0.25%	–0.40%	–0.76%	–0.46%	–1.11%

SOURCE: Heritage Foundation calculations using Open Source Policy Center OG-USA model. See text for details.

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Policy Solutions

President Donald Trump's recent executive order detailed seven core principles for regulating the U.S. financial system.[15] The order calls for "efficient, effective" financial regulations that "foster economic growth," which means that it is incompatible with the bulk of the Dodd–Frank Act. Dodd–Frank's answer to the 2008 financial crisis was to institute

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15. Presidential Executive Order on Core Principles for Regulating the United States Financial System, February 3, 2017, https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-executive-order-core-principles-regulating-united-states (accessed March 27, 2017).

more federal regulation and oversight—despite the fact that this approach has repeatedly failed in the past.[16] Worse, Dodd–Frank did little to address the root causes of the crisis and simply expanded the federal safety net for financial firms. Congress should repeal the Dodd–Frank Act.

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TABLE 3

Dynamic Revenue Impact

IN BILLIONS OF NOMINAL DOLLARS

	10–year	20–year
22 Basis Points, Closed	$340	$817
22 Basis Points, Open	$127	$404
11 Basis Points, Closed	$170	$409
11 Basis Points, Open	$64	$202

NOTE: Figures exclude Social Security revenue.
SOURCES: Heritage Foundation calculations and Congressional Budget Office, *The Budget and Economic Outlook: 2017–2027*, January 24, 2017, https://www.cbo.gov/publication/52370 (accessed March 27, 2017).

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16. Norbert J. Michel, "Repealing Dodd–Frank and Ending 'Too Big to Fail,'" Heritage Foundation *Backgrounder* No. 2973, November 3, 2014, http://www.heritage.org/report/repealing-dodd-frank-and-ending-too-big-fail; and Michel, ed., *The Case Against Dodd–Frank: How the "Consumer Protection" Law Endangers Americans*. House Financial Services Committee Chairman Jeb Hensarling (R–TX) has released a discussion draft of legislation that would replace large parts of Dodd–Frank. See Norbert J. Michel, "Money and Banking Provisions in the Financial CHOICE Act: A Major Step in the Right Direction," Heritage Foundation *Backgrounder* No. 3152, August 31, 2016, http://www.heritage.org/research/reports/2016/08/money-and-banking-provisions-in-the-financial-choice-act-a-major-step-in-the-right-direction#_ftn20.

Appendix: The OG-USA Model

The OG-USA model was originally developed by Jason DeBacker and Richard W. Evans,[17] among others, based loosely on an approach popularized by Alan Auerbach and Laurence Kotlikoff.[18] The model is open-source software, hosted by the Open Source Policy Center, where end users can personalize it and offer contributions.[19]

The branch of the model that one of us personalized and used for this project can be found at https://github.com/salimfurth/OG-USA/tree/tax_analysis. Readers are invited to review and check our work. We emphasize that any remaining errors are our own responsibility.

The OG-USA model integrates a microsimulation of the personal income tax with an overlapping-generations model. Firms are competitive and perfectly symmetric. Agents have perfect foresight. There is no involuntary unemployment.

Federal finance in the model mixes rich modeling of individual income tax revenues and Social Security revenues and distributions with simple modeling of corporate income taxes, government purchases, and transfers other than Social Security.

Financial intermediation is not modeled. The excess costs of financial intermediation assumed by the investment wedge are not assigned as any individual's income.

In its current form, OG-USA assumes that the federal government pays the market interest rate on its debt. This assumption has little influence on other aspects of the model, but it departs substantially from consensus forecasts of federal interest payments over the next decade. Thus, we do not report savings that arise from lowering the federal debt.

Every model massively simplifies the real world, and this one is no exception. Any of these assumptions, however, could be relaxed without overturning the core result of our simulation: If financial intermediation becomes less costly, investment will rise and lead to an increase in wages and national income.

17.   Jason DeBacker and Richard W. Evans, "Documentation for OG-USA," GitHub, March 2016, https://github.com/open-source-economics/OG-USA/blob/master/Model%20Writeup/OGUSA_TaxBrain_version.pdf (accessed March 27, 2017).

18.   Alan J. Auerbach and Laurence J. Kotlikoff, *Dynamic Fiscal Policy* (Cambridge, MA: Cambridge University Press, 1987), http://www.kotlikoff.net/sites/default/files/Dynamic%20Fiscal%20Policy_1.pdf (accessed March 27, 2017).

19.   OG-USA (Version 0.5.6) [Source Code], https://github.com/open-source-economics/OG-USA (accessed March 31, 2017).