



# Net Operating Losses: Proposed Extension of Carryback Period

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## Summary

A net operating loss (NOL) is incurred when a business taxpayer has negative taxable income. An NOL can be used to obtain a refund for taxes paid in the past and/or to reduce future tax obligations. The process of using an NOL to refund previously paid taxes is known as an NOL carryback, whereas the process of using an NOL to reduce future taxes is known as a carryforward. Under current law, there is a 2-year carryback period and a 20-year carryforward period for most business taxpayers.

Recently, the American Recovery and Reinvestment Act of 2009 (H.R. 598 and S. 1), introduced in the 111<sup>th</sup> Congress, would provide taxpayers with an opportunity to extend the carryback period for up to five years for NOLs incurred in 2008 and 2009. Under H.R. 598, a taxpayer's NOL would be reduced by 10% if the taxpayer elected the extended carryback period. Both bills would suspend the 90% alternative minimum tax limitation on deductions for NOLs incurred in 2008 and 2009. In addition, H.R. 598 and S. 1 would prohibit companies receiving aid under the Troubled Asset Relief Program (TARP) from electing the extended carryback period.

In the 110<sup>th</sup> Congress legislative attention also focused on temporarily extending the two-year carryback period. Early versions of the Housing and Economic Recovery Act of 2008 (H.R. 3221) included proposals that would have extended the carryback period to up to four years. The final version of H.R. 3221 that became law (P.L. 110-289) left the carryback period unchanged. The Small Business Stimulus Act of 2008 (S. 2552 and S. 2553) would extend the carryback period to five years for losses incurred in 2007 and 2008. The Midwestern Disaster Tax Relief Act of 2008 (S. 3322 and H.R. 6587) proposes to extend the two-year NOL carryback period to four years for qualified disaster areas affected by recent severe weather in the Midwest.

The intent of the NOL carryback/carryforward provision is to give taxpayers the ability to smooth out changes in business income, and therefore taxes, over the business cycle. Extending the carryback period would enhance the ability of firms to smooth income by allowing losses to be offset against a longer period of past profits rather than having them carried forward. The extension would, however, increase revenue losses to the federal government.

Economic theory suggests that, under certain conditions, extending the carryback period indefinitely could minimize the distorting effects taxation has on investment decisions and, in turn, increase economic efficiency. This result stems from the observation that the majority of the tax burden falls on risky investments. The government, by allowing NOL carrybacks, effectively enters into a partnership with taxpayers when losses are allowed to be carried back, sharing both the return to investment (tax revenue) and the risk of investment (revenue loss). Extending the carryback period indefinitely would reduce the tax burden by reducing the private risk associated with investing. Further gains in economic efficiency are possible if the government can spread risk better than can be done in private markets. Those gains, however, come at the expense of lost federal revenue.

This report explains the current law and proposed legislation regarding the tax treatment of NOLs. In addition, this report highlights a number of policy considerations relating to the extension of the NOL carryback period.

This report will be updated in the event of legislative changes.

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**T**axpayers experience a net operating loss (NOL) when their taxable business income is negative. The year in which an NOL occurs is called the NOL year, or loss year. Taxpayers have no tax liability in the year that they experience an NOL. An NOL can be used, however, to obtain a refund for taxes paid in prior years and/or to reduce future tax liabilities. Using an NOL to refund past taxes paid is known as an NOL carryback. Applying an NOL to a future tax liability is referred to as an NOL carryforward (or carryover). According to the Joint Committee on Taxation, the intent of the NOL carryback/carryforward provision is to give taxpayers the ability to smooth out changes in business income, and therefore taxes, stemming from the business cycle and unexpected financial losses.<sup>1</sup>

In the 110<sup>th</sup> Congress, legislative attention has focused on temporarily extending the two-year carryback period. The new proposed carryback periods range from four to five years. Given the current economic environment a large number of business taxpayers could be potentially affected. This report explains the current law and proposed legislation regarding the tax treatment of NOLs. In addition, this report highlights a number of policy considerations relating to the extension of the NOL carryback period.

## Overview

In general, a taxpayer with an NOL can carry it back to the 2 taxable years preceding the NOL year, and/or carry it forward to each of the 20 taxable years following the NOL year.<sup>2</sup> An NOL may not be used to offset more than 90% of a taxpayer's alternative minimum taxable income (AMTI) in any one year. The Internal Revenue Code lists several exceptions to the general 2-year carryback/20-year carryforward provision.<sup>3</sup> For example, losses as a result of casualty, theft, or a presidentially declared disaster are eligible to be carried back three years. Farming losses may be carried back five years. The portion of an NOL due to a specified liability loss may be carried back to the 10 years preceding the loss year.<sup>4</sup> Real estate investment trusts (REITs) are not allowed to carry an NOL back, but are entitled to carry a loss forward up to 20 years.

Current law stipulates that an NOL is to be first carried back to the two years preceding the loss year, beginning with the earliest year first. If the carryback does not fully exhaust the NOL, the remaining portion is then carried forward to the 20 years following the loss years. To take advantage of an NOL a taxpayer must file either an amended income tax return, or an application for tentative refund.<sup>5</sup> The taxpayer would use the appropriate form to first recalculate his or her tax liability for the earliest eligible carryback year. This calculation involves claiming the NOL as part of that year's tax deductions. The taxpayer then receives, as a refund, the difference between

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<sup>1</sup> U.S. Congress, Joint Committee on Taxation, *General Explanations of Tax Legislation Enacted in the 107<sup>th</sup> Congress*, committee print, 107<sup>th</sup> Cong., 2<sup>nd</sup> sess. (Washington: GPO, 2003), p. 220.

<sup>2</sup> Internal Revenue Code (IRC) § 172(b).

<sup>3</sup> The complete list can be found in IRC § 172(b)(1).

<sup>4</sup> Examples of specified liability losses include the expense incurred in the investigation or defense against a claim of product liability, a deduction due to reclamation of land, or certain costs attributable to the remediation of environmental contamination.

<sup>5</sup> IRS Forms 1120X and 1040X are the amended income tax returns for corporations and individuals, estates, and trusts, respectively. The appropriate applications for a tentative refund for corporations and individuals, estates, and trusts are IRS Forms 1139 and 1045, respectively.

the actual taxes paid in the previous year, and the new tax liability resulting from the NOL carryback.<sup>6</sup>

Although the procedure is for an NOL first to be carried back to the earliest carryback year and then applied to each successive year, a taxpayer may irrevocably waive the carryback period. The NOL is then carried forward in a manner similar to the one described above. A taxpayer expecting to be in a considerably higher tax bracket in the future may find it beneficial to only carry an NOL forward. In general, however, a taxpayer will prefer to carry back an NOL rather than carry it forward. A carryback allows an immediate benefit of the amount of the refunded tax payment, whereas a carryforward reduces future taxes whose value must be discounted to the present. The need to discount a future tax reduction due to an NOL carryforward results in the present value of an NOL carryback exceeding the present value of an NOL carryforward.<sup>7</sup> A carryback, additionally, provides a certain tax refund whereas a carryforward reduces a tax liability at some potentially uncertain time in the future.

## Legislative Developments

The current regime of a 2-year carryback period and a 20-year carryforward period was instituted in 1997 with the Taxpayer Relief Act of 1997 (P.L. 105-34). Prior to that time, NOLs were subject to a 3-year carryback and a 15-year carryforward. The Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508) increased the NOL carryforward period from 7 to 15 years.

Since 1997, changes to the carryback period have either involved temporary extensions or targeted provisions. For example, in the 105<sup>th</sup> Congress, the Tax and Trade Relief Act of 1998 (P.L. 105-277) permanently extended the NOL carryback period for losses relating to farming to five years. The 107<sup>th</sup> Congress temporarily extended the NOL carryback period from 2 to five years for losses incurred in 2001 and 2002 as part of the Job Creation and Worker Assistance Act of 2002 (P.L. 107-147). The extension, designed to provide tax incentives for economic recovery, also allowed NOL carrybacks and carryovers to offset up to 100% of a business's AMTI.

The 109<sup>th</sup> Congress passed the Gulf Opportunity Zone Act of 2005 (P.L. 109-135) in response to the destruction caused by Hurricanes Katrina, Rita, and Wilma. The act extended the carryback period from two to five years for qualified losses occurring in the Gulf Opportunity Zone (or GO Zone). In addition, the act expanded the list of acceptable deductions used for determining NOLs in the Go Zone, effectively increasing the amount of losses a taxpayer could recover.

In the 110<sup>th</sup> Congress a number of bills have been introduced that would extend the NOL carryback period. Early versions of the Housing and Economic Recovery Act of 2008 (H.R. 3221) included proposals to extend the carryback period to up to four years. The final version of H.R. 3221 that became law (P.L. 110-289) left the carryback period unchanged.

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<sup>6</sup> A practical illustration is useful to show how an NOL carryback works; one can be found in **Appendix A**.

<sup>7</sup> The present value of future cash flows reflects the time value of money (i.e., why a dollar received today is more valuable than a dollar received in the future). **Appendix B** explains the concept of present values. Also contained in **Appendix B** is an example computing the present value of an NOL carryback and an NOL carryforward.

The Small Business Stimulus Act of 2008 (S. 2552 and S. 2553) would allow NOLs incurred in 2007 and 2008 to be carried back five years. The 90% AMTI carryback and carryover limitation for NOLs would also be suspended for losses in those two years.

The Midwestern Disaster Tax Relief Act of 2008 (S. 3322 and H.R. 6587) proposes to extend the two-year NOL carryback period to four years for qualified disaster areas affected by recent severe weather in the Midwest. The 90% AMTI limitation would also be waived for qualified disaster losses.

Most recently, the American Recovery and Reinvestment Act of 2009 (H.R. 598 and S. 1), introduced in the 111<sup>th</sup> Congress, would provide taxpayers with an opportunity to extend the carryback period for up to five years for NOLs incurred in 2008 and 2009. Under H.R. 598, a taxpayer's NOL would be reduced by 10% if the taxpayer elected the extended carryback period. In addition, H.R. 598 and S. 1 would extend the carryback period for losses from operation for life insurance companies from three to five years. Both bills would also suspend the 90% alternative minimum tax limitation on deductions for NOLs incurred in 2008 and 2009.

In addition, H.R. 598 and S. 1 would prohibit companies receiving aid under the Troubled Asset Relief Program (TARP) from electing the extended carryback period. Specifically, any company in which the government acquires an equity interest, or warrant to acquire an equity interest, under the Emergency Economic Stabilization Act of 2008 (P.L. 110-343), would be prohibited from electing the extended carryback period. So too would be the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac).

The Joint Committee on Taxation (JCT) estimates that the modifications proposed by H.R. 598 would cost \$15.8 billion for FY2009 through FY2018.<sup>8</sup> The JCT also estimates that the modifications proposed by S. 1 would cost \$18.0 billion for FY2009 through FY2018.<sup>9</sup> The House version costs less in foregone revenue because of the 10% reduction in NOL requirement mentioned above.

## **Policy Considerations**

As mentioned above, the 110<sup>th</sup> Congress has introduced several pieces of legislation that would address the treatment of NOLs. The following considerations could be helpful to policy makers interested in the recent proposals to change the treatment of NOLs. The discussion below distinguishes between the tax treatment of NOLs as a method to enhance economic efficiency, and the use of NOL carrybacks to stimulate economic activity.

### **Economic Efficiency**

The intent of the NOL carryback/carryforward provision is to give taxpayers the ability to smooth out changes in business income, and therefore taxes, over the business cycle. Increasing the

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<sup>8</sup> U.S. Congress, Joint Committee on Taxation, *Estimated Budget Effects of The Chairman's Amendment in The Nature of a Substitute to H.R. 598, The "American Recovery and Reinvestment Tax Act of 2009"*, 111<sup>th</sup> Cong., 1<sup>st</sup> sess., January 22, 2009, JCX-9-09.

<sup>9</sup> U.S. Congress, Joint Committee on Taxation, *Estimated Budget Effects of The American Recovery and Reinvestment Tax Act of 2009*, 111<sup>th</sup> Cong., 1<sup>st</sup> sess., January 23, 2009, JCX-11-09.

fraction of AMTI that may be offset using an NOL from 90% to 100% would promote income smoothing by allowing taxpayers to fully recover current losses now, as opposed to in the future. In addition, extending the carryback period would enhance the ability to smooth income by allowing losses to be offset against a longer period of past profits rather than having them carried forward. The extension would, however, increase revenue losses to the federal government. As previously mentioned, carrybacks are more valuable than carryforwards due to the time value of money (i.e., a dollar today is more valuable than a dollar in the future).

Economic theory suggests that, under certain conditions, extending the carryback period indefinitely would minimize the distorting effects taxation has on investment decisions and, in turn, increase economic efficiency.<sup>10</sup> This result stems from the observation that the majority of the tax burden falls on risky investments. The government effectively enters into a partnership with taxpayers when losses are allowed to be carried back, sharing both the return to investment (tax revenue) and the risk of investment (revenue loss). Extending the carryback period indefinitely would reduce the tax burden by reducing the private risk associated with investing. Further gains in economic efficiency are possible if the government can spread risk better than private markets.

The need to minimize revenue losses introduces some practical limitations that prevent the indefinite carryback of NOLs. Some economists believe that allowing indefinite carrybacks would result in a large negative revenue effect, particularly during an economic downturn.<sup>11</sup> Others have noted that encouraging investors to undertake risky investments is generally highly desirable, except in periods of acute economic boom.<sup>12</sup> It could be argued that in an extremely expansionary period investors are already making sufficiently risky investments and that adding further incentives to take on more risk is unnecessary.

Although an indefinite carryback period may be practically infeasible, most economists agree that the NOL carryback period must be long enough to allow for adequate income smoothing and an efficient degree of investment-risk reduction over the business cycle.

Since World War II the duration of the average business cycle has been approximately six years. Extending the NOL carryback period to at least the length of the typical business cycle would, arguably, allow for more income smoothing and risk reduction. Income smoothing and risk reduction could also be enhanced by paying interest on losses carried forward.<sup>13</sup>

## **Economic Stimulus**

Some economists believe that extending the NOL carryback period during an economic downturn could stimulate business investment, an important component of economic growth. Businesses on the margin of profitability may choose to speed up investments planned for the future. By investing now, a firm's tax-related deductions resulting from the investment may result in an NOL, which can be used to receive a refund for previously paid taxes.

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<sup>10</sup> Evsey D. Domar and Richard A. Musgrave, "Proportional Income Taxation and Risk-Taking," *The Quarterly Journal of Economics*, vol. 58, May 1944, p. 388.

<sup>11</sup> Andrew Weiss, "A Tax Reform to Alleviate Recessions and Reduce Biases in the Tax Code," Boston University Working Paper, Jan. 1999.

<sup>12</sup> Domar and Musgrave, "Proportional Income Taxation and Risk-Taking," p. 391.

<sup>13</sup> **Appendix C** presents an example of NOL carryforwards that accrue interest.

Additionally, businesses experiencing large current losses could apply their losses over a longer profitable period in the past, resulting in a more immediate refund of taxes paid than would have otherwise been possible. The refund could provide businesses that are unable to raise capital in financial markets with enough extra cash to pursue profitable investment opportunities. The current lack of available credit stemming from events in the subprime mortgage market that have spilled over into other segments of the financial markets could be one reason why it may be difficult for some to secure investment financing.

Other economists have argued that some businesses are unable to raise capital needed to make new investments because profitable investment opportunities are limited as a result of the recent slowdown in economic activity. Firms could be inclined to hold onto any increase in cash resulting from larger NOL carryback refunds if rewarding investment opportunities do not appear. Uncertainty over the current path of the economy may further exacerbate the desire of some firms to hold cash and invest it at a later date.

It has been noted by some that an extension of the carryback period would tend to benefit older businesses over newer businesses.<sup>14</sup> Older businesses that are currently experiencing losses, but that have been profitable in the years included in the proposed extended carryback window, will receive an immediate and certain tax refund. New firms, on the other hand, do not necessarily have a long past of profitable years to which NOLs can be carried back. These younger firms can therefore only carry losses forward. But carryforwards are valued less than carrybacks because a carryforward must be discounted, and also because its benefit depends on the realization of income at some uncertain point in the future. Thus, the benefits of the proposed carryback legislation would tend to accrue to older businesses.

## Conclusion

Policy makers face a number of trade-offs when addressing the desirability of an extension of the NOL carryback period. A longer carryback period would reduce the tax burden on business taxpayers by reducing private risk and promoting income smoothing and, as a result, increase economic efficiency. On the other hand, the revenue effect on the federal budget will be larger the longer losses are allowed to be carried back.

In the short-run, extending the NOL carryback period will provide some business investors with an influx of cash, but it does not guarantee that these taxpayers will use the cash to pursue new stimulative investment opportunities. If attractive investment opportunities exist in the economy, then allowing businesses access to previously paid taxes may result in the undertaking of new investment. On the other hand, if there is a large degree of economic uncertainty businesses will likely hold on to any NOL tax refund. In this case, the stimulative effects would diminish.

Another issue is determining the optimal carryback and carryover period lengths. A two-year carryback period is relatively short compared to the average post World War II business cycle of around six years. A longer carryback period may increase the ability to smooth income over the business cycle. However, it is also important to keep in mind the trade-offs previously discussed

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<sup>14</sup> Benzion Barlev and Haim Levy, "Loss Carryback and Carryover Provision: Effectiveness and Economic Implications," *National Tax Journal*, vol. 28, June 1975, p. 173.

when considering an expansion of the carryback period, particularly the potential increase in federal revenue loss.

## Appendix A. NOL Carryback

The following example illustrates the basic calculations involved in carrying back an NOL, and the mechanism through which an NOL carryback allows for smoothing of income. **Table A-1** illustrates two firms whose total business income, costs, and taxable income are similar over a two-year period. The firms differ, however, in the timing of their annual income and costs. It is assumed that both firms face a 35% corporate income tax.

Firm A's taxable income in each year is \$25 million. Therefore, each year Firm A pays \$8.75 million in corporate income taxes, for a total two-year tax liability of \$17.5 million. Firm A has no NOL in either year so its tax liability with and without NOL carrybacks is the same.

Firm B has taxable income equal to \$75 million in year one, but incurs an NOL equal to \$25 million in year two. Firm B must pay \$26.25 million in taxes in year one. If Firm B is not permitted to carryback its year-two NOL, its total two-year tax liability will equal taxes paid in year one; \$26.25 million. On the other hand, if Firm B is allowed to carryback its year-two NOL, it will be able to receive a partial refund for taxes paid in year one.

To receive the refund Firm B will recalculate its year-one tax liability by subtracting its \$25 million NOL in year two from its \$75 million year-one taxable income and applying the 35% corporate income tax rate. The recalculated year-one tax liability is found to be \$17.5 million ( $\$50 \text{ million} \times 35\%$ ). Firm B is then entitled to receive, as a refund in year two, the difference between its taxes actually paid in year one, and the new recalculated tax liability. The refund paid to the firm in year two as a result of its NOL is calculated to be \$8.75 million ( $\$26.25 \text{ million} - \$17.5 \text{ million}$ ).

Allowing Firm B the opportunity to carry back its NOL allowed it to smooth income. As a result both firms had the same total two-year tax liability, in-line with both firms having the same total two-year taxable income.

**Table A-1. Net Operating Loss Example**  
(in millions of dollars)

	Firm A			Firm B		
	Yr 1	Yr 2	Total	Yr 1	Yr 2	Total
Business Income	\$150	\$150	\$300	\$150	\$150	\$300
Costs and Deductions	\$125	\$125	\$250	\$75	\$175	\$250
Taxable Income	\$25	\$25	\$50	\$75	(\$25)	\$50
Tax <i>without</i> NOL carryback	\$8.75	\$8.75	\$17.5	\$26.25	-	\$26.25
Tax <i>with</i> NOL carryback	\$8.75	\$8.75	\$17.5	\$26.25	(8.75)	\$17.5

**Source:** CRS calculations.

## Appendix B. Present Values

The concept of present value is essential to understanding the time value of money (i.e., why a dollar received today is more valuable than a dollar received in the future). Money received at different points in time is valued differently because of the opportunity to earn a return on money received earlier. As a result, taxpayers will usually prefer to carry back an NOL (and receive income in the present year), rather than carry it forward (and wait to receive income in the future).

To see this, consider a taxpayer that must decide between an NOL carryback and an NOL carryforward. For simplicity, it is assumed that the taxpayer can either receive a tax refund today equal to \$10 million from carrying back the NOL, or reduce taxes owed next year by \$10 million by carrying the NOL forward. It is also assumed that the annual rate of return on investment is 10%.

By choosing to carryback the NOL, the taxpayer receives \$10 million today which could be invested to earn a 10% return. On the other hand, the taxpayer forgoes the opportunity to such a return if they choose to carry the NOL forward. Thus, the taxpayer will prefer to carry the NOL back rather than carry it forward. An economist would say that the present value of the NOL carryback is greater than the present value of the NOL carryforward.

The formula for calculating the present value (PV) of \$X to be received N years in the future is

$$PV = \frac{\$X}{(1+r)^N}$$

where  $r$  is the return on investment (e.g., an interest rate). When the rate of return is 10%, the PV of a \$10 million carryforward tax rebate that is to be received in one year is

$$PV = \frac{\$10\text{million}}{(1+r)^1} = \$9.1\text{million}$$

Therefore, \$10 million received in one year is equivalent to \$9.1 million received today. But the present value of a \$10 million carryback tax refund, which is received today, is simply \$10 million. Thus, it is preferable to carry back an NOL in order to receive money today, rather than to carry it forward to reduce future taxes.

## Appendix C. Paying Interest on NOL Carryforwards

Some economists have suggested that NOL carryforwards should earn interest. This could benefit taxpayers unable to fully exhaust their NOLs through carrybacks. As mentioned previously in the report, new firms may not have enough years of past profitability to fully take advantage of an NOL carryback. Allowing interest to accrue on carryforwards could reduce the discrepancy between the NOL tax treatment of new and old firms.

Continuing with the previous example, assume that a taxpayer can either receive a tax refund today equal to \$10 million from carrying back an NOL, or reduce taxes owed next year by \$10 million by carrying an NOL forward. Again it is assumed that the rate of return on investment is 10%. Now, however, assume that the government pays interest on carryforwards equal to the taxpayer's rate of return on investment. Thus, a \$10 million rebate from a carryforward that earns 10% interest will be worth \$11 million in one year.

Recall that the formula for calculating the present value (PV) of \$X to be received N years in the future is

$$PV = \frac{\$X}{(1+r)^N}$$

where  $r$  is the interest rate. When the interest rate is 10%, the PV of a \$10 million carryforward tax rebate that earns 10% interest and will be received in one year is

$$PV = \frac{\$10\text{million} \times 1.10}{(1.10)^1} = \$10\text{million}$$

Therefore, a \$10 million carryforward that earns 10% interest and that will be received in one year is equivalent to \$10 million received today. Recall that the present value of a \$10 million carryback tax refund, which is received today, is simply \$10 million. Thus, when NOL carryforwards earn interest they will have the same present value as a carryback. In this example taxpayers will be indifferent between a carryback and a carryforward.

The example above assumes that a firm's rate of return on investment is equal to what the government would pay in interest. It is likely the government would use a Treasury rate to determine the interest paid on NOL carryforwards. The present value of an NOL carryforward would be less than an equal NOL carryback if the interest rate paid on carryforwards by the government were less than the firm's rate of return on investment. On the other hand, the present value of a carryforward would exceed that of an equal carryback if the government's interest rate were greater than the firm's rate of return on investment.

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