Classroom Discussion of Net Operating Losses

Let's look at how IRC § 172 works. Assume a taxpayer has the following gross income, business deductions, taxable income, and tax liability (timely paid) for the following years (assume a flat tax rate of 25 percent, to keep the math simple):

Year	*Gross income*	*Business deductions*	*Taxable income*	*Tax liability*
2020	$ 100	$ 60	$ 40	$ 10
2021	$ 100	$ 60	$ 40	$ 10
2022	$ 100	$ 60	$ 40	$ 10

Now assume that in the year 2023, the taxpayer has gross income of $20 and deductions of $80, for taxable income of negative $60. This negative taxable income for the year is what's known as a net operating loss, or "NOL." See IRC § 172(c). The NOL is determined when the taxpayer fills out its 2023 return, which shows no tax owing.

That $60 NOL represents deductions that did not do the taxpayer any good in 2023, because even without them, taxable income for 2023 would have been zero. Can the taxpayer carry the $60 NOL back to earlier years, take new deductions on amended returns for those years, and get immediate tax refunds for those years? There's an appealing case to be made for that outcome, as a policy matter, and until recently, IRC § 172 allowed it. The taxpayer has been taxed on a $120 profit for the three years shown in the table above, and now the business' overall cumulative profit has fallen to only $60.

But under modern-day IRC § 172 (starting with NOLs arising in 2021), a "carryback" to earlier years is not allowed – not unless the taxpayer is a farmer or insurance company. See IRC § 172(b)(1). Let's assume that our taxpayer is not a farmer or insurance company.

Next, suppose that in 2024, the taxpayer has gross income of $80 and business expense deductions for the year of $60, for taxable income of $20. Normally, at 25 percent, this would generate $5 of tax liability ($20 times .25). But wait! Here is where IRC § 172 comes into play.

On the 2024 tax return, the taxpayer can take, in addition to the other $60 of deductions for the year, an NOL carryover deduction (sometimes called an NOL carryforward deduction) under IRC § 172. See IRC §§ 172(a), 172(b)(1)(A)(ii). Subsection (a) shows the amount of the deduction. It's the lesser of the NOL carryovers to 2024 (the $60 NOL from 2023), or 80 percent of the 2024 taxable income without IRC § 172 (.80 times $20 = $16). In this case, the lesser amount is 80 percent of taxable income, and so the deduction under IRC § 172 is that amount, $16.

In the end, taking IRC § 172 into account, the taxpayer's final taxable income for 2024 is $4 ($20 minus $16). At an assumed tax rate of 25 percent, the 2022 tax is only $1 – not $5, which is what it would have been without the NOL carryover.

With that deduction taken on the 2024 tax return, $16 of the NOL carryover from 2023 is used up (or "absorbed") in 2024. But there's still $44 of additional NOL carryover from 2023 ($60 minus $16) that's available in future years.

Next, assume that in 2025, things really turn around. The taxpayer has gross income of $120, and business expense deductions for the year of $50, for taxable income of $70. Normally, at 25 percent, this would generate $17.50 of tax liability. But again, IRC §172 comes into play.

On the 2025 tax return, the taxpayer can take, in addition to the other $50 of deductions for the year, another NOL carryover deduction under IRC § 172. Again, the amount of the deduction is the lesser of the NOL carryovers to 2025 ($44 remaining from 2023), or 80 percent of the 2025 taxable income without IRC § 172 (.80 times $70 = $56). In this case, the lesser amount is the $44 NOL carryover from 2023, and so the deduction under IRC § 172 is that amount. In the end, taking IRC § 172 into account, the taxpayer's final taxable income for 2025 is $26 ($70 minus $44). At a tax rate of 25 percent, the 2025 tax is only $6.50 – not $17.50 (25 percent of $70), which is what it would have been without the NOL carryover deduction.

Laying out the last three years of this scenario shows how that three-year period worked out for tax purposes:

Year	*Gross income*	*Business deductions*	*Taxable income (after applying § 172)*	*Tax liability*
2023	$ 20	$ 80	-0-	-0-
2024	$ 80	$ 60	$ 20 – $ 16	$ 1
2025	$ 120	$ 50	$ 70 – $ 44	$ 6.50
Totals	***$ 220***	***$ 190***	***$ 30***	***$ 7.50***

Looking at the bottom line, you can see that the effect of IRC § 172 was to treat the three years as a single period. For that whole period, the net profit was $30, and the tax was $7.50. If it weren't for IRC § 172, each year would have stood on its own two feet (the bedrock principle unless Congress says otherwise). The $60 NOL would have been wasted, and the tax would have been $15 higher – $22.50 (25 percent of $90).