Managing the Economics Of the Tax Gross-Up

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In this article, Hosny explains how tax gross-up arrangements should be designed to not only make one party to a transaction whole but also to prevent the amount of the tax gross-up from having a disproportionately negative effect on the paying party.

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Mergers and acquisitions and other deals and business transactions are sometimes designed to provide one party with a tax gross-up paid by another party to the transaction. Yet many agreements contemplating a gross-up do not include a limitation or a cap. The justification offered is usually that a cap might prevent the party being grossed up from being made whole, which would defeat the purpose of the gross-up. But that position ignores the consequences of the gross-up to the paying party.

The purpose of a tax gross-up is to put the party that incurred an increase in taxes because of the transaction in the same position that it would have been in had that increase in taxes not occurred. For example, if the payment to be made under the terms of an agreement before any gross-up is $100, and assuming the recipient of the payment is subject to a 30 percent tax rate, the recipient would only net $70 after tax:

$$\$100 - (\$100 * 30\%) = \$70$$

$$\text{Or } \$100 * (1 - 30\%) = \$70$$

$$\text{Or } \$70 = \$100 * (1 - 30\%)$$

This can be represented as the formula: After-tax payment = pretax payment * (1 - t), in which t is the recipient's tax rate. Without a gross-up provision, the recipient would only receive $70 after tax. But because of the gross-up provision, the payment amount would need to be increased so that after tax, the recipient would receive $100. Using the above formula, we can manipulate both sides of the equation to arrive at the grossed-up payment:

$$\textbf{After-tax payment} = \textbf{Pretax payment} * \textbf{(1 - }t\textbf{)}$$

$$\frac{\textbf{After-tax payment}}{\textbf{(1 - }t\textbf{)}} = \frac{\textbf{Pretax payment} * \textbf{(1 - }t\textbf{)}}{\textbf{(1 - }t\textbf{)}}$$

$$\frac{\textbf{After-tax payment}}{\textbf{(1 - }t\textbf{)}} = \textbf{Pretax payment}$$

$$\textbf{Pretax payment} = \frac{\textbf{After-tax payment}}{\textbf{(1 - }t\textbf{)}}$$

This can be rewritten as $\textbf{Grossed-up payment} = \dfrac{\textbf{\textit{P}}}{\textbf{(1 - }t\textbf{)}}$

in which P is the after-tax payment the recipient is entitled to receive under the agreement and t is the recipient's tax rate. Thus, for the recipient to receive $100 after tax, it must receive:

$$\frac{\$100}{1 - 0.3} = \frac{\$100}{0.7} = \$142.86$$

To confirm that the grossed-up payment of $142.86 puts the recipient in the same position in which it would have been had there been no tax imposed on the $100, we can use the following formula:

$$\textbf{After-tax payment} = \textbf{Pretax payment} * \textbf{(1 - }t\textbf{)}$$

$$\text{After-tax payment} = \$142.86 * (1 - 0.3)$$

$$\text{After-tax payment} = \$100$$

Another way of looking at the grossed-up payment is as a series of infinite payments using the following formula in which P is the payment being grossed up — that is, the after-tax payment — t is the recipient's tax rate, and n is the number of payments:

$$\sum_{n=0}^{\infty} P * t^n$$

In our example, P is $100 and t is 0.3. Substituting these values in the formula, we have:

$$\sum_{n=0}^{\infty} 100 * 0.3^n = \$142.86$$

The infinite series being summed can be shown as:

$$(100 * 0.3^0) + (100 * 0.3^1) + (100 * 0.3^2) +$$
$$(100 * 0.3^3) + (100 * 0.3^4) + \ldots (100 * 0.3^n)$$
$$= 100 + 30 + 9 + 2.7 + 0.81 + \ldots = 142.86$$

In other words, if the grossed-up payment were viewed as a series of infinite payments, the first payment would be $100, on which the recipient would be subject to 30 percent tax, or $30. The recipient would then be entitled to a gross-up payment of $30, which itself would be subject to a 30 percent tax of $9, and so on. As the number of gross-up payments increases, the amount of each subsequent gross-up payment decreases. Theoretically, as the number of payments approaches infinity, the amount of the subsequent gross-up payment approaches zero and the total of the payments approaches $142.86. Instead of having to deal with a series of infinite payments, parties to gross-up arrangements typically contemplate one grossed-up payment computed using the formula:

$$\textbf{Grossed-up payment} = \frac{\textbf{P}}{\textbf{(1 - }t\textbf{)}}$$

One interesting phenomenon in connection with this formula is that for any after-tax payment P, as the recipient's tax rate becomes larger, the value of the denominator becomes smaller, and the value of the grossed-up payment becomes larger. The table shows how the grossed-up payment changes in relation to the recipient's tax rate.
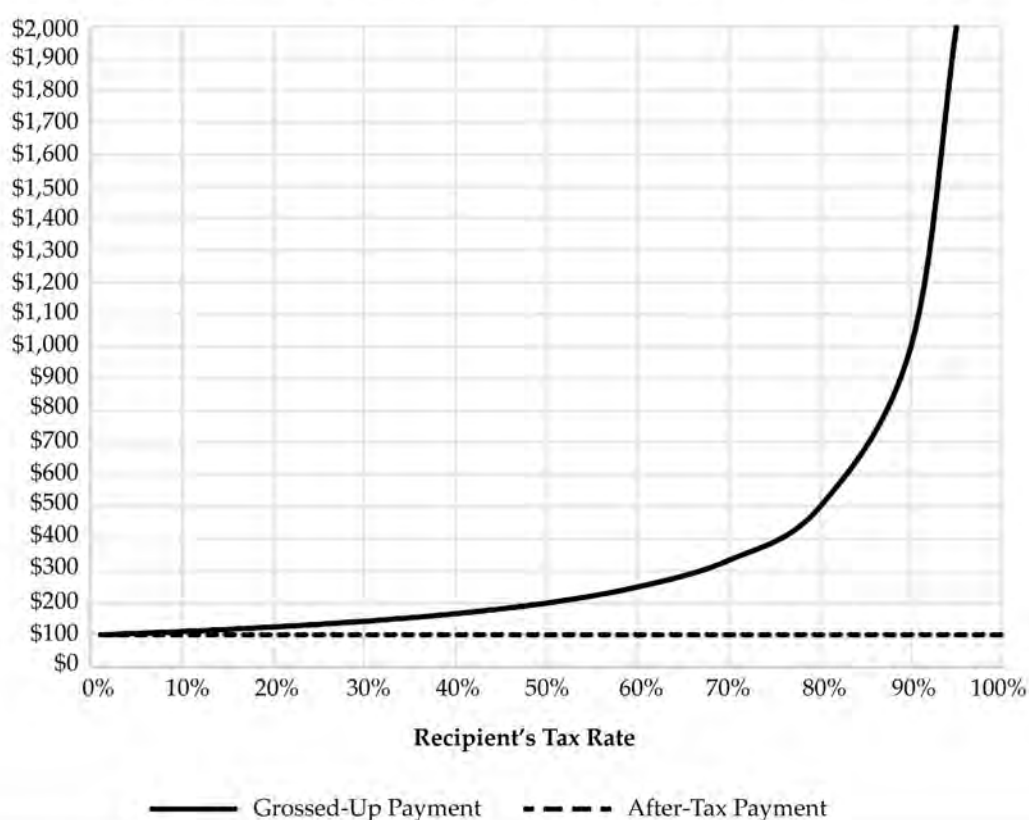
Gross-Up on $100 After-Tax Payment Computed at Different Tax Rates of Recipient
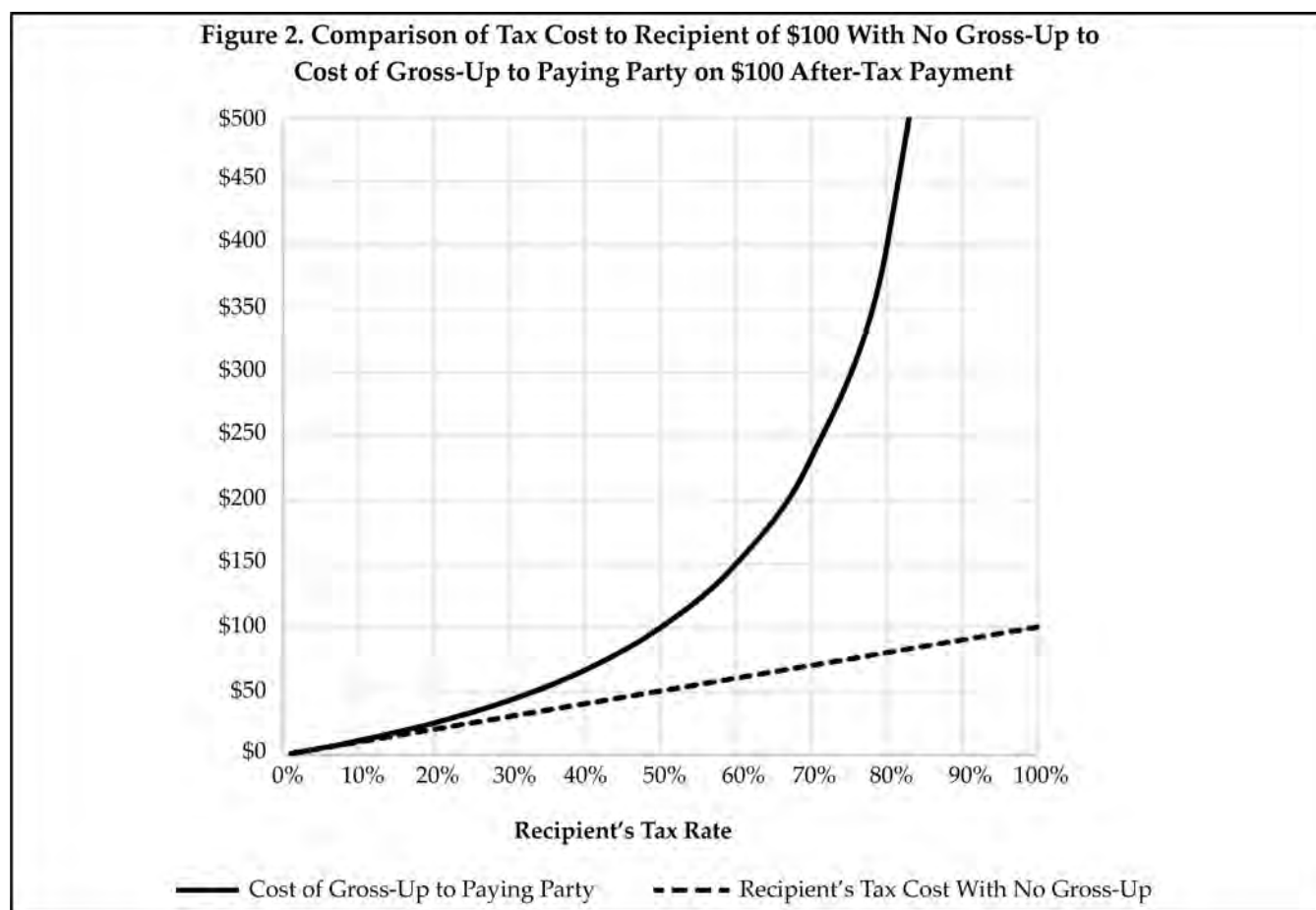
Recipient's Tax Rate	After-Tax Payment	Grossed-Up Payment	Recipient's Tax Cost With No Gross-Up	Cost of Gross-Up to Paying Party	Excess of Cost of Gross-Up to Paying Party Over Recipient's Tax Cost With No Gross-Up
1.0000%	$100	$101.01	$1.00	$1.01	$0.01
3.0000%	$100	$103.09	$3.00	$3.09	$0.09
5.0000%	$100	$105.26	$5.00	$5.26	$0.26
10.0000%	$100	$111.11	$10.00	$11.11	$1.11
20.0000%	$100	$125.00	$20.00	$25.00	$5.00
30.0000%	$100	$142.86	$30.00	$42.86	$12.86
40.0000%	$100	$166.67	$40.00	$66.67	$26.67
50.0000%	$100	$200.00	$50.00	$100.00	$50.00
60.0000%	$100	$250.00	$60.00	$150.00	$90.00
70.0000%	$100	$333.33	$70.00	$233.33	$163.33

Gross-Up on $100 After-Tax Payment Computed at Different Tax Rates of Recipient *(Continued)*

Recipient's Tax Rate	After-Tax Payment	Grossed-Up Payment	Recipient's Tax Cost With No Gross-Up	Cost of Gross-Up to Paying Party	Excess of Cost of Gross-Up to Paying Party Over Recipient's Tax Cost With No Gross-Up
80.0000%	$100	$500.00	$80.00	$400.00	$320.00
90.0000%	$100	$1,000.00	$90.00	$900.00	$810.00
95.0000%	$100	$2,000.00	$95.00	$1,900.00	$1,805.00
99.0000%	$100	$10,000.00	$99.00	$9,900.00	$9,801.00
99.9900%	$100	$1,000,000.00	$99.99	$999,900.00	$999,800.01
99.9999%	$100	$100,000,000.00	$100.00	$99,999,900.00	$99,999,800.00

Figure 1. Grossed-Up Payment to Provide Recipient With $100 After Tax

From Figure 1 and the table we can see that when the recipient's tax rate is 20 percent, the grossed-up payment that would result in a $100 after-tax payment is $125. However, any slight increase in the recipient's tax rate results in a disproportionately higher increase in the grossed-up payment. For example, at a tax rate of 50 percent, the grossed-up payment would be $200, meaning that the party paying for the gross-up would end up paying 200 percent of the after-tax payment to make the recipient whole. At a tax rate of 60 percent, the grossed-up payment is 250 percent of the after-tax payment. And at a tax rate of 80 percent, the grossed-up payment is 500 percent of the after-tax payment. At a 99 percent tax rate, an after-tax payment of $100 would result in a grossed-up payment of $10,000. In theory, as the recipient's tax rate approaches 100 percent, the grossed-up payment approaches infinity.

Figure 2. Comparison of Tax Cost to Recipient of $100 With No Gross-Up to Cost of Gross-Up to Paying Party on $100 After-Tax Payment

The counterargument, of course, is that it would be unlikely for a taxpayer to have an 80 percent tax rate, or even a tax rate higher than 50 percent. However, the terms "tax" or "taxes" are defined in many transaction documents to include additions to tax, such as penalties and interest, as well as various types of taxes (plus additions to those taxes) imposed by various jurisdictions. But even if it is unlikely that a recipient's tax rate would climb above 50 percent, that risk does exist. If not addressed in the applicable gross-up provision, or otherwise addressed in the transaction documents, a disproportionate risk may be allocated to the party responsible for making the gross-up payment merely because of the structure of the gross-up formula. Moreover, even if the risk that the recipient's tax rate exceeds 50 percent decreases as the tax rate increases above 50 percent, the gross-up payment increases at an alarmingly increasing rate as the recipient's tax rate increases. Thus, a smaller risk of a higher tax rate could be offset, at least to some extent, by the amount of a grossed-up payment that approaches infinity as the recipient's tax rate approaches 100 percent.

To demonstrate the disproportionate effect of the gross-up on the parties as the tax rate increases, Figure 2, which is derived from the table above, compares, at various tax rates of the recipient, the tax cost to a recipient of receiving a $100 payment without a gross-up with the cost to the paying party of a grossed-up payment intended to provide the recipient with an after-tax payment of $100. As the recipient's tax rate increases, the tax cost to the recipient increases proportionately in relation to the increase in the tax rate. But unlike the recipient, as the tax rate increases, the cost of the gross-up payment to the paying party increases at an accelerated rate.

It would thus seem prudent that, depending on the particular facts of each transaction, parties intending to enter into agreements with tax gross-up provisions should consider placing a cap on

gross-ups to prevent unintended consequences. Parties may consider a cap on the recipient's tax rate used in the gross-up computation. For example, by capping the tax rate used in the gross-up formula at 50 percent, the grossed-up payment would be capped at 200 percent of the after-tax payment. Alternatively, parties could agree to a cap on the grossed-up payment as a multiple of the after-tax payment. Also, parties may agree to a fixed sum as a global cap on the grossed-up payment. While a tax gross-up is usually viewed as a benign provision intended to make one party to the transaction whole, the economics of the gross-up formula should be managed to not only achieve that result but also to prevent the amount of the tax gross-up from having a disproportionately negative effect on the paying party. ∎