

Checking Purchase Price for Reasonableness

When we estimate the value of a business, we are estimating the price at which it could be sold. Of course, buyers will only buy a business when it makes “financial sense” to do so. A purchase makes financial sense when the proposed price and terms allow for the following three tests to be met:

Test #1: Is the business able to pay fair compensation for the talent and labor contributed by each owner?

Test #2: Can all post-purchase debt be comfortably serviced via normal “commercial” terms?

Test #3: Will the equity holders receive a fair return on investment?

So XYZ Company is worth \$1,200? Okay, let’s see if it passes the three tests of reasonableness. To do this, you’ll need:

a. *Beginning Balance Sheet*: Should be a “best guess” of what it will look like on the first day after the hypothetical purchase/sale before any purchase related debt or equity.

b. *Ten-Year Projections*: These must include annual income statements, balance sheets and statements of cash flows.

c. *Debt Service Requirements*: Projected until all purchase related debt is repaid.

XYZ Company	
<u>Balance Sheet</u>	
Cash	\$25
Accounts Receivable	\$300
Inventory	\$300
Furniture, Fixtures and Equip.	\$400
Total Assets	<u>\$1,025</u>
Accounts Payable	\$100
Other Current Liabilities	\$50
Long Term Liabilities	\$0
Total Liabilities	<u>\$150</u>
Equity	<u>\$875</u>
Total Debt and Equity	<u>\$1,025</u>
<u>Income Statement</u>	
Revenue	\$2,500
Cost of Goods Sold	(\$1,500)
Gross Profit	\$1,000
Operating Expense	(\$700)
Pre-Tax Profit	\$300
Taxes	(\$100)
Non-Cash Expense (Depr.)	\$50
Cash Flow (after tax)	<u>\$250</u>

Above is the summary balance sheet and income statement for XYZ.

At the top of the table is the proforma beginning balance sheet (day 1 of new ownership). Below it is a proforma income statement and estimate of cash flow for the first year of ownership

before any interest or principal payments on debt (purchase-related or otherwise). For simplicity, we will assume each year will perform as year one (i.e. flat income and cash flow in each year post-purchase)

Test #1: Fair Compensation for the Talent and Labor of Each Owner-Employee?

Business owners are notorious for sacrificing pay. However, why buy a business that cannot pay fair compensation to the owners for their talent, time and effort? What is “fair?” It’s the compensation that could and would be obtained “on the open market.” If you could get a job for \$50,000 per year working full time, the business should be able to pay you this “fair market rate.” So the first test is, “Can the business afford to pay the working owners a fair price for their labor?” This test is met when, in your projections, you burden the business with fair compensation for all the owner employees and the business will still make a profit and have positive cash flow from operations.

Test #2: Will Projected Cash Flow Cover the Debt Service?

Businesses are purchased with debt and equity. The senior obligation is to debt. The second test of reasonableness is whether the business will generate enough cash to comfortably make all of its debt payment obligations ... both interest and principal.

To estimate this, you need more than the price of the business. You need to know how the purchase price will be paid – the “deal structure.” Because investors typically want to borrow as much as they are able (equity is scarce and more costly than debt), it makes sense to first estimate the amount of bank debt that could be borrowed against the assets off the business. To do this, take the proforma balance sheet to your banker. Below we have applied common loan-to-value rules of thumb to XYZ’s assets.

	Value	Loan to Value	Loan Amount
Accounts Receivable	\$300	80%	\$240
Inventory	\$300	70%	\$210
Furniture, Fixtures and Equ.	\$400	50%	\$200
			<u>Total Bank Borrowing: \$650</u>

As calculated, \$650 can be borrowed against the assets of the business. Loan terms on business purchase transactions, non-real estate, are typically five to seven years. We’ll use seven for our example and assume that the bank wants all of the debt repaid over the seven years (as opposed to leaving the A/R and inventory portion on a revolving line of credit) at a 7% rate.

The remainder (\$550) of the total price must come from equity, seller financing, or a blend of the two. Now every seller will say, “I won’t seller finance”, but the numbers hardly ever work when there is no seller financing. And, studies show that 80% of private businesses that sell do so with seller financing. (By the way, of the company’s sales that do include seller financing, the most typical percent of the price is 50%).

For this example, let's assume that the buyer and seller agree to split the balance of the purchase price that cannot be borrowed from a traditional lender. That places \$275 in seller financing and \$275 in cash contributed by the buyer (i.e. equity). So, the equity piece comes to 23% of the total purchase price. This is in the range of what we actually see in the real world (most deals have 20% to 30%).

Because the seller debt will be subordinate to the bank financing, it is more risky and merits a higher rate of interest than the senior debt. Let's say three points over prime or 9%.

Now, add to your projections the debt service obligations for both bank and seller financing, as in the accompanying table. For explanations of the other calculations in the table, study the notes.

Test #3: Will the equity holders receive a fair return on investment?

Well, what is a "fair return" for an equity investment in a private company? We know that over the past 80 years in the United States, holders of equity in publicly traded companies have earned per year, on average, 11% and 18% for large cap and micro cap stocks, respectively. Given that equity stakes in private companies tend to be much more risky, slower growth, volatile and illiquid, return on investment should be higher. Generally, private equity stakes should yield AT LEAST 25%, if not higher.

So, what do we estimate the return to equity would be on XYZ Company at the \$1,200 valuation and using the deal structure example above? Using your financial calculator or Excel, you can take the projected annual free cash flow from the table above, apply it to the initial cash invested (\$275) and you will get a 38% after tax internal rate of return. This substantially exceeds our minimum threshold of 25%, so the estimated value of XYZ of \$1,200 meets the third test.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Projected Cash Flow (after tax) ¹	250	250	250	250	250	250	250
Bank Loan Interest, Net of Tax ²	\$25	\$22	\$17	\$14	\$10	\$6	\$2
Bank Loan Principal ³	\$93	\$93	\$93	\$93	\$93	\$93	\$93
Seller Loan Interest, Net of Tax ⁴	\$14	\$11	\$10	\$7	\$5	\$3	\$1
Seller Loan Principal ⁵	\$39	\$39	\$39	\$39	\$39	\$39	\$39
Free Cash Flow ⁶	\$79	\$85	\$91	\$97	\$103	\$109	\$115*
Interest Expense Coverage ⁷	6.4	7.6	9.3	11.9	16.7	27.8	83.3
Debt Service Coverage ⁸	1.5	1.5	1.6	1.6	1.7	1.8	1.9
Internal Rate of Return (IRR)	38%						

1. Projected cash flow is derived via projections. Cash flow here is after tax and all expenses except purchase related debt.

2. To keep our analysis on an after tax cash basis, we adjust the interest expense to after tax. Doing so calls for a reduction of interest expense because interest is tax deductible, so the real cash cost of the interest is 60% of the gross or pre-tax cost (calculated by using a 40% blended federal and state tax rate). For example, bank loan interest expense in year one is \$42, times 60% (calculated as one minus the tax rate of .40) is 25%.

3. Annual bank loan principal is simply the borrowed amount (\$650) divided by the loan term (seven years). No tax adjustment is needed as principal borrowing and repayment does not impact taxes.

4. Seller loan interest is derived by using common terms for seller financing – seven year note at prime plus 3 percentage points (we used 9%). See note 2 above for the rationale for adjusting to after-tax.

5. Seller loan principal is the annual amount of principal that must be paid on the seller note (\$275 divided by 7).

6. “Free cash flow” is the excess cash generated each year after all obligations are met (compensation, taxes, interest and principal). This is the number that contributes to the investors (buyer) return on investment (calculated in this case via the IRR method).

7. Interest coverage ratio is an important indicator of the ease to which cash flow is able to pay interest burden. Banks, in the very worst case, want to be sure interest can be paid. The coverage here is very healthy.

8. Debt Service coverage ratio shows the ease to which the business is able to meet its total principal and interest obligations. A ratio of 1.0 would indicate that there is just enough cash to meet the P&I burden. Lenders and investors want a cushion for safety, of course. 1.5 is a common threshold of safety. Anything above 1.5 is even healthier. As we can see, debt service coverage begins at a fairly healthy 1.5 and then slowly improves in the later years.

* Beginning in year eight, free cash flow is \$250, as all debt service will be paid by end of year seven. This is also after fair compensation to the owners.

This article is adapted from an article titled “The Justification of Purchase Test” by Rand M. Curtiss, which appeared in the fall 1999 issue of Business Appraisal Practice

Note: *In an attempt to keep this example simple, some liberties have been taken. Before you make investment decisions, consult an expert.*