

Cost, Value, and Price

- **Company A stock closes today at a price of \$35.00, down \$5.00 from yesterday's close.**
- **At a Sotheby's art auction two bidders are tied at \$40 million for a Van Gogh painting, one raises the price to \$41 million, and the other drops out. The winner now has bought the painting for \$41 million.**
- **Your brother-in-law just paid \$21,000 to a new-car dealer for a Toyota Camry.**
- **A local bidder offers to put up a newly constructed house on a lot you own at a cost of \$300,000.**
- **Privately held Internet Company B sells shares to a Venture Capital firm at \$7.00 per share and offers options to employees the next day at \$5.00 per share. Six months later the company has an initial public offering (IPO) at \$18.00.**
- **A business buys a used milling machine at a "bargain price" of \$50,000 and insures it for \$65,000; the bank will lend only \$35,000 to the company with the milling machine as collateral.**
- **Company C is currently selling on the New York Stock Exchange at \$55.00 per share, and an unfriendly tender offer is made at \$75.00 per share.**
- **A 40 percent short-term spike in lumber prices causes homes built in October 20xx to cost 7 percent more than the identical house next door built just one month earlier, as well as one built on the other side**

two months later. A *current* buyer today couldn't care less about lumber prices five years ago, so the market value of the three homes is identical. Yet homeowner's insurance premiums are based on original cost, multiplied by a current cost index. The October home is now paying \$70 a year more for insurance than its two neighbors, although the three homes are physically identical.

- The trustee for your uncle's estate, in order to close the estate, sells his residence for \$200,000, even though it is assessed at \$240,000, and you thought nearby houses were selling for about \$265,000.
- A jewelry firm advertises a contest on the Internet, the winner to receive a pair of diamond stud earrings "valued at \$1,000."
- Construction equipment is a highly competitive industry. During the annual budget preparation a worksheet showing the "standard cost" for both the current and following year of a high-volume tractor was left out on the desktop overnight. One of the analysts was extremely concerned the next morning that a competitor could possibly have gained access to this highly confidential material. Fears were expressed that the company could be hurt badly. The analyst, however, was unable to explain the exact nature of the adverse impact.

Each of these mini-cases has a common element. In one form or another they demonstrate how in our capitalist form of society the *market* determines cost, value, and price. Unfortunately, while cost, value, and price are three separate and distinct concepts, many business managers, as well as consumers who are buyers, get these concepts confused. Cost and (selling) price differ. Selling price and value differ. And, finally, cost does not equal value. Yet in common parlance the three terms are all too often used interchangeably, albeit incorrectly.

The primary reason that people hire an appraiser is to determine *value*. To accomplish that, appraisers use cost and selling price as aids in determining value. However, cost does not equal value, and neither does selling price.

Value, to simplify things, represents the amount at which "willing buyers and willing sellers" would transact a purchase/sale, as long as both parties had full knowledge and were under no pressure to buy or sell.

There are many reasons people want to know the value of something, and it is usually related, in one form or another, to a prospective transaction. Rarely do people want knowledge of values just for the sake of knowl-

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edge. But when a transaction is imminent and it is important that the deal be fair to all parties, people call on appraisers.

An appraisal is nothing more or less than an opinion of value, usually expressed by someone with knowledge, training, and experience in the area under consideration. To the extent that the appraiser is neutral and unbiased, and to the extent that sufficient research has been performed, the answer provided as to value can:

- Be relied upon by both parties; and
- Is probably accurate to within 10 percent, plus or minus.

Unfortunately, because of the confusion among cost, value, and price, parties to a transaction often have difficulty in truly communicating with each other. Let us look at each of these mini-cases in precise terms and then derive some general principles.

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One of the basic concepts taught in every business school is that we have an “Efficient Market,” particularly as it refers to the stock market, where at least in theory all relevant knowledge is impounded in the current price of a stock. Many studies have demonstrated that, in one form or another, the Efficient Market exists. Some analysts have found that for small firms, not followed by many analysts, it may take some time for the market to comprehend the latest information. Nonetheless, study after study demonstrates conclusively that the market is indeed efficient.

But if the market is so efficient, how do we explain the large and sudden swings we see listed every day in the *Wall Street Journal*? Every day at least 20 companies have swings—up or down—of more than 15 percent. Does it really make sense that a company that misses its quarterly earnings forecast by one cent per share is really worth *15 percent less* the next day? The same security analysts who put out the earnings forecast now punish the company for missing their projections by issuing an immediate “sell” signal.

In this instance, is the company selling less product to customers? Have costs of doing business suddenly risen. Have strong new competitors come on the scene? Has management changed? In every case the answer is probably NO. The sales are the same today as yesterday. The costs of doing

business are the same today as yesterday. The management is the same today as yesterday.

In fact, *nothing* basic to the company has changed, other than the market price of a few shares at the margin, those that traded yesterday. The fact that a few shares were traded between buyer and seller at a lower price than the day before does not mean the *value* of the company has diminished.

The *value* of the company is unchanged, if you define value in terms of the present value of future cash flows. Revenues are the same. Costs and expenses are the same. Investor perceptions may have changed, but perhaps those investor perceptions are themselves incorrect. Not only is the public often wrong, but the public also often changes its mind!

Many of the same companies, whose stocks drop precipitously one day, come back over the next month or so to the old level. What then is the real value of the business? Is it based on the number of shares outstanding multiplied by today's market price (assuming no outstanding debt), or is the value *independent* of the current day's price? In this instance, market price and real long-term value are not the same.

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The price at which the painting sold is clear, that is, \$41 million. But is that the *value*? The standard definition of *fair market value* states:

Fair market value is defined as the price for which property would exchange between a willing buyer and a willing seller, each having reasonable knowledge of all relevant facts, neither under compulsion to buy or sell, and with equity to both.

This implies both a buyer and a seller. Two aspects must be kept in mind with regard to the day after the Van Gogh buyer paid his \$41 million. Since there is only a single copy of the painting, the present owner from the previous day probably does not want to sell, so he is not the willing seller of the definition. Even more important, the most logical buyer would be the so-called underbidder. But we saw that he had dropped out at \$40 million and had been unwilling to go up even one more bid. Presumably, that individual (or institution) would still be willing to pay \$40 million, but that

means an immediate diminution in value to the auction winner. What is the *value* of the painting?

An interesting example of this phenomenon was reported in the *New York Times* (May 11, 2000). A Cezanne painting was up for sale with an estimate of \$5 to \$7 million. “The circa 1898 landscape had bad luck tonight. It sold for \$4.5 million but was reoffered late in the sale due to a misunderstanding with the winning bidder. The second time, it died at \$4.3 million.” What this particular Cezanne painting was worth in May 2000 is far from clear.

There is a second factor that might indicate the painting’s *value* differs from its *cost* to the buyer. “Auction fever” is a well-known phenomenon, whereby two bidders go far above what either of them anticipated, just to make sure the other bidder does not walk off with the prize. In practice, auctioneers attempt to stimulate this type of rabid bidding, knowing that the highest possible price will be realized. Inasmuch as the auction house receives a percentage of the final selling price, the higher the final bid the more the auction house collects.

But once the auction is over and Auction Fever has been eliminated, it is likely that the winning buyer now suffers from another phenomenon called *buyer’s remorse*. Were he to put the same object back up for auction a few months later, he might only receive 75 to 80 percent of what he himself had paid.

In short, reported auction *prices*, which represent a true willing buyer and willing seller *at the moment of the transaction*, may not represent *value* as we usually think of it. Put a different way, one man’s *cost* may not be another man’s *value*. This does not mean that auction prices realized should be discounted. After all, money did change hands at that moment.

Just as auction fever can raise the current price *above* true value, so can an auction result in *lower* prices. If there has not been sufficient publicity about an auction there may be too few willing buyers to arrive at so-called market prices. That is the reason many auctions have reserve prices. If the bidding does not reach some predetermined minimum, the item is not sold. But an item can meet the minimum reserve price and be sold, and yet represent a true bargain purchase.

The moral is clear. Auction *prices*, the *cost* to the buyer, may well not reflect long-term *value*.

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- **Your brother-in-law just paid \$21,000 to a new-car dealer for a Toyota Camry.**
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Assume for the time being that the dealer really sold the car at his cost, as so many dealers advertise. In order to stay in business a dealer has to make a profit, so most people are somewhat skeptical of a car dealer's claim he is selling for cost. But it can happen; to simplify the example, perhaps it was the last day of the month and this one sales transaction meant the salesperson or the dealer reached quota, thus generating some additional bonus.

At this point the *cost* to the dealer was \$21,000. The *price* paid by the buyer was \$21,000; thus, the *cost* to the buyer was \$21,000. With all of this, what is the *value* of the car?

Answers to this type of valuation question keep appraisers and valuation professionals in business, albeit not for single automobiles. If value were simply a matter of determining the cost or looking up the most recent price, life would be a lot simpler, but perhaps less remunerative for appraisers.

In this situation the answer to the question of the car's *value* is a function of the *purpose* for which the value information is needed. For example, the State Farm insurance agent wants to value the car on the basis of *replacement cost*. In this situation the replacement cost might be \$22,000, inasmuch as the dealer sold the car at his cost, and presumably cannot do this all the time. A \$1,000 gross profit appears reasonable, so State Farm would value the car at \$22,000.

The local assessor, looking at the appropriate property tax assessment, might go to an automobile Blue Book and look up the retail price of a current year's used car. This could well be \$19,000. At this point we have a car for which the buyer paid \$21,000, insured it for \$22,000, and is paying tax on \$19,000 of valuation—One car, three values.

Suppose the buyer sees a Ferrari for which he has had a lifelong desire. The Ferrari dealer offers him a \$25,000 trade-in on the new sport car. How can the dealer do that? Easily, because it is no more nor less than a sales discount on the high-priced Ferrari, in the form of an over-allowance on the trade-in.

Finally, suppose the prospective buyer of the Ferrari decides he wants a straight cash discount and offers to sell his original car to his neighbor at the current market price. They go to the newspaper and see that similar cars are being advertised at between \$17,500 and \$19,500. To save time and enmity between friends they decide mutually to split the difference and the neighbor buys the virtually new car for \$18,500.

Now we have one car and five different values. All of them, while different, are correct—for the specific purpose and transaction. This is the reason that the very first question any appraiser asks before taking on an assignment is, "What is the value information to be used for?"

- **A local bidder offers to put up a newly constructed house on a lot you own at a cost of \$300,000.**
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This is pretty straightforward. When a builder, contractor, or other professional says “that will *cost* . . .” what he is really saying is that \$300,000 is his *selling* price. You, as the buyer, do not know the seller’s *cost* to perform the work.

Only the U.S. government tries to have a seller reveal his costs. What may not be well known is that many government contractors have to expose their books to government auditors, and the final sales price they receive is a function of the approved costs. Unapproved costs are not paid for by the government and come out of profits. Needless to say, this approach to contracting and procurement leads to numerous differences of opinion as to just what cost really is or should be.

- **Privately held Internet Company B sells shares to a Venture Capital firm at \$7.00 per share and offers options to employees the next day at \$5.00 per share. Six months later the company has an IPO at \$18.00.**
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This example represents a true-life situation. Companies want to reward employees and managers with low-price options prior to an IPO, essentially compensating the individuals for the sacrifices they made during the early start-up days. But to avoid compensation expense, options have to be granted at their Fair Market Value.

The Securities and Exchange Commission (SEC) is very sensitive to this issue, because of its emphasis on protecting investors in the IPO. The question they ask is, “How can the same company double in value just a few months before the public is being asked to invest?” Implicit in this question is the question, “What is the value of a privately held firm planning a future IPO, a transaction that may or may not occur?”

The sale to an investor at \$7.00 and the granting of options at \$5.00 at the same time appears, on the surface, to be a conflict. Examined more closely, it may not be.

An appraiser might value the company as a whole and conclude that the \$5.00 per share option grant was truly at fair market value. The appraiser would be willing to defend that price with the IRS and SEC.

Then how can the \$7.00 price be justified to the Venture Capital firm? The large investor may have a lot of money to put to work, like the subject company, and need a substantial position to make the investment worthwhile. He is willing to pay a premium to acquire a large block, which may well encompass a seat on the board of directors. The \$2.00 premium truly reflects the law of supply and demand; looked at a different way, to the Venture Capital firm, they are willing to pay a premium to “get in on the ground floor” if they believe that a future IPO not only is likely, but will take place.

Meanwhile, the employees granted the options are probably working at compensation levels below the normal market, anticipating their reward as and when the company goes public.

In this situation all sides are satisfied, and the differing price truly represents value, given their individual circumstances.

The SEC, however, is uncomfortable about this situation. If the IPO is closely tied to the previous bargain prices, they raise a question about favoritism and inside dealing. It is beyond the scope of this chapter to explain the SEC’s rationalization. Suffice it to say here that it is possible to rebut the SEC’s presumption about value’s increasing sharply just because of an IPO. What is not so easy is to determine whether this difference is of the order of magnitude of 50 percent or 150 percent. (This topic is covered further in Chapter 16.)

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- **A business buys a used milling machine at a “bargain price” of \$50,000 and insures it for \$65,000; the bank will lend only \$35,000 to the company with the milling machine as collateral because that is its liquidation value in the case of a forced sale.**
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The insurance company insists on valuing the machine at \$65,000, because in case of loss that is the amount it will take to replace the machine. Similar to the example above, where insurable values are often more than cost, here is a situation where cost on the one hand and *liquidation value* on the other are far apart. In this instance, the issue has to be looked at from the perspective of the lender.

No bank or finance company wants to pay off its loan through sale of the borrower’s collateral. It is far better for the borrower to repay the loan

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from current cash flow. But if the business fails and there is only negative cash flow, the only hope for the bank lies in sale either of the business as a whole or of the individual assets on a piecemeal approach.

Hence, financial institutions value assets put up for collateral on a worst case basis. They assume that the asset may be in poor physical condition because of lack of maintenance while the borrower was suffering financially. They assume a forced liquidation, wherein prospective buyers realize the bank is not the proverbial willing seller.

The bank or finance company cannot utilize the milling machine in its own activities. Further, some cash is better than none. It costs the bank money to hold assets for sale, and requires management time and effort during the sale process. The quicker the sale, the better, from the lender's perspective. Thus, to a lender the value of the milling machine is not what it sold for, the recent cost to the borrower. Rather, the value is what the machine could realize in a forced sale "under the hammer," in an undetermined, but probably poor, condition.

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- **Company C's stock is currently selling on the New York Stock Exchange at \$55.00 per share and an unfriendly tender offer is made this evening at \$75.00 per share.**

The fact is that the \$55.00 share price and the \$75.00 price are both correct. The reason is that based on current facts and investor perceptions, the \$55.00 is the fair market value (FMV) for shares that have *no control* over the firm's activities. This is sometimes referred to as a *minority* price.

Now if someone wants to acquire control of the company, by owning over 50 percent of the voting shares, it is necessary to pay a *premium* to induce existing shareholders to sell their stock. If nothing else, individual shareholders will now be responsible for paying a capital gains tax, not to mention the need to identify some other investment with the cash they received from tendering their stock to the raider.

What we have here is a two-price system. Shares that control the company are worth more than shares that can receive only what management decides to give them.

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door built just one month earlier, as well as one built on the other side two months later. A *current* buyer today couldn't care less about lumber prices five years ago, so the market value of the three homes is identical. Yet homeowner's insurance premiums are based on original cost, multiplied by a current cost index. The October home is now paying \$70 a year more for insurance than its two neighbors, although the three homes are physically identical.

Insurable values are based on the cost of reproduction, what it would cost today to rebuild the structure in case of loss. Obviously, the cost of reproduction today is totally unaffected by lumber prices from five years ago.

However, the most cost-effective way to determine the cost of reproduction today is to apply a *cost index* to the original cost. Cost indexes are relatively blunt instruments that are not sophisticated enough to distinguish short-term fluctuations in original cost from five years ago. In short, determining the cost or value today, based on application of an index, can be no more accurate than the underlying information.

- **The trustee for your uncle's estate, in order to close the estate, sells the uncle's residence for \$200,000, even though it is assessed at \$240,000, and you thought nearby houses were selling for about \$265,000.**
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The basic definition of FMV assumes a theoretical willing buyer and an equally theoretical willing seller. Ordinarily, when individuals are selling their own home, they will attempt to obtain the maximum price, even if this means waiting for the right buyer to appear. Waiting an extra month or two may well result in selling the home at its true market value.

In the case of an estate, however, the trustee is under pressure to close things out and settle with the heirs. Thus, the trustee is likely to accept the first reasonable offer received, irrespective of the possibility of obtaining slightly more by waiting.

If you or an appraiser are now researching actual reported transactions to try and determine comparable prices for your own home, it is imperative that you understand the full nature of reported and recorded sales. That is, all sales reports are not of equal validity. Several years ago, during the Sav-

ings and Loan crisis, it was reported in the press that market participants had formed rings and colluded to report a series of ever-higher prices for the same property. Those transactions were then used to justify a very large loan that was never repaid.

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- **A jewelry firm advertises a contest on the Internet, the winner to receive a pair of diamond stud earrings “valued at \$1,000.”**
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In the final analysis, value represents what someone is willing to pay for an asset. So it is probably true that a piece of jewelry is valued at a certain amount; the announcer’s wife might well pay \$1,000, and who can say she is wrong? But that does not mean that *you* would pay that amount. Value is in the eye of the beholder.

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- **Construction equipment is a highly competitive industry. During the annual budget preparation a worksheet showing the standard cost for both the current and following year of a high-volume tractor was left out on the desktop overnight. One of the analysts was extremely concerned the next morning that a competitor could possibly have gained access to this highly confidential cost information. Fears were expressed that the company could be hurt badly. The analyst, however, was unable to explain the exact nature of the adverse impact.**
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Cost information is usually considered to be one of the most highly confidential types of information within a company, exceeded in sensitivity only by salary and compensation data. But just exactly what can Company A do with knowledge of Company B’s cost information?

Suppose Gateway knows to the penny what Dell has to pay to buy a computer made in Korea. Just what can Gateway do with this information? Each firm has its own design, its own distribution system, its own marketing program. You cannot change one element in an integrated system without affecting all parts of the system. If Gateway found that Dell was paying less for a display screen, how would this help Gateway without perhaps requiring a basic engineering redesign of the product?

Or suppose that ExxonMobil finds out that Shell is paying less per hour to its workers at a Texas refinery. What can ExxonMobil do? It cannot move its refinery. It probably cannot renegotiate its contract with the union.

Dozens more examples would only confirm the statement that cost, like value, is in the eye of the beholder. There are many definitions of cost, which will be discussed in Chapter 5. For different business purposes it may help to know one or more of these levels of cost. But, as a generalization, cost is always related to a specific set of circumstances, and can only be used as a basis for decisions when all the parameters are known.

GENERAL PRINCIPLES

The first lesson to be learned is one of semantics. The terms *cost*, *value*, and *price* are *not* interchangeable. They relate to three separate and distinct concepts. When used improperly, erroneous ideas may be communicated.

Cost accountants may differ on the meaning of the term *cost*. The cost of any manufactured item may range from the prime cost of just material and direct labor, through various levels of full cost including overhead, up to an amount that bears a proportionate share of all sales, general and administrative (SG&A) expenses. From a seller's perspective, cost does not include profit, so a seller's selling price consists of cost plus profit, however measured and for whatever purpose.

From a buyer's perspective, the price he pays to acquire an asset then becomes his cost, at least for purposes of financial accounting and tax accounting. Further, in the absence of compulsion, the *value* to the buyer at the moment of acquisition is the *price* he paid, which was his *cost*, again however cost is measured in terms of cost accounting concepts. But almost immediately after the asset is acquired, the value is likely to change, as we have seen in the mini-cases discussed in this chapter.

There are as many definitions of *value* as there are of *cost*. The cost of a product for transfer pricing will differ from the cost for calculating gross profit upon sale to a third party. If considering outsourcing a production part, then the cost to make the product will *differ* from the cost used to buy the part from an outside vendor.

Similarly as we have seen, *insurable values* are usually based on the *cost of reproduction*. The value for financing of the same asset will be based on *liquidation value*. Liquidation value and cost of reproduction are at opposite ends of the value spectrum. In the middle is the concept of value in use. Appraisers use the term *value in use* to refer to the *replacement cost* of an asset, less depreciation from all causes.

Conclusion

In allocating the purchase price in a business combination, the value in use concept is widely utilized. As one can see, this value concept in turn depends on an estimate by the appraiser of replacement cost. Replacement cost, then, is the price that would have to be paid to buy an asset of equivalent utility, not necessarily a one-for-one replica of the subject.

The term *value* has almost as many definitions as the term *cost*. While cost is usually related to an actual or anticipated cash outlay, value relates to an assumed transaction. Appraisers, in determining an estimate of value, may look to cost as one element. But there is an alternative if deriving value, and that is to look at the actual selling price of other comparable transactions. Thus, in valuing the stock of a closely held corporation for which there have been no sales, an appraiser would search out comparable publicly traded companies and see the price(s) at which they sold. Adjustments to reflect size and marketability might be required, but the starting point would always come back to actual reported prices.

CONCLUSION

Professional appraisers deal with the concepts of *cost*, *value*, and *price* in every aspect of their work. With regard to *cost*, whether in trying to develop a target costing approach to new product development or installing a new enterprise resource planning (ERP) system to reduce inventories and increase quality, decisions have to be made about product and material costs, prices (both selling and purchase) and values of existing assets.

With regard to *price*, it is necessary to understand the actual nature of the transaction. The price at which a Van Gogh painting sold at auction differs from the price of lumber in a competitive market, and both differ from the price at which IBM stock closed yesterday.

With regard to *value*, we must always understand the purpose for which the information will be used and the kind of decision that will be made with the answer. There are as many different values as there are purposes.

Precise and accurate use of the three terms will avoid miscommunication as well as enhance the dialog among the parties at interest. Cost may or may not be the same as price. Price may or may not be the same as value. Value may or may not be based on cost. What has made these terms confusing for many users is that the same reference term has many different uses or definitions, *depending on the purpose*. When defined clearly and used properly, each of the concepts can be highly valuable. When not defined at all, or when used improperly, communication will be lost.