STATISTICAL PRICE ANALYSIS

Seller Report and Recommendation

Prepared November 28, 2003

The question:

The house we need to come up with a selling price for is on Monterey Ave in Pacific Grove, CA. The owners wish to sell at the highest possible price. They would like to list the home at $1,000,000, and sell for the upper 900's, say at least $970,000.

Time-to-sale is less of a priority, but please do some analysis time as well. Also, the sellers would consider adjusting the list price, if that would help. The key question for the seller is: What sales price could they realistically expect to sell at, with high likelihood?

The data: The realtor-prepared CMA was used as the data that forms the basis of this price analysis. The data used was the list price, sales price and time to sale (days on market) for each sold property in the CMA.

The rest of this report provides the analysis and recommendation. You may also want to glance over the definitions (where terms such as probability, etc are explained).

Quick Links:

DEFINITIONS

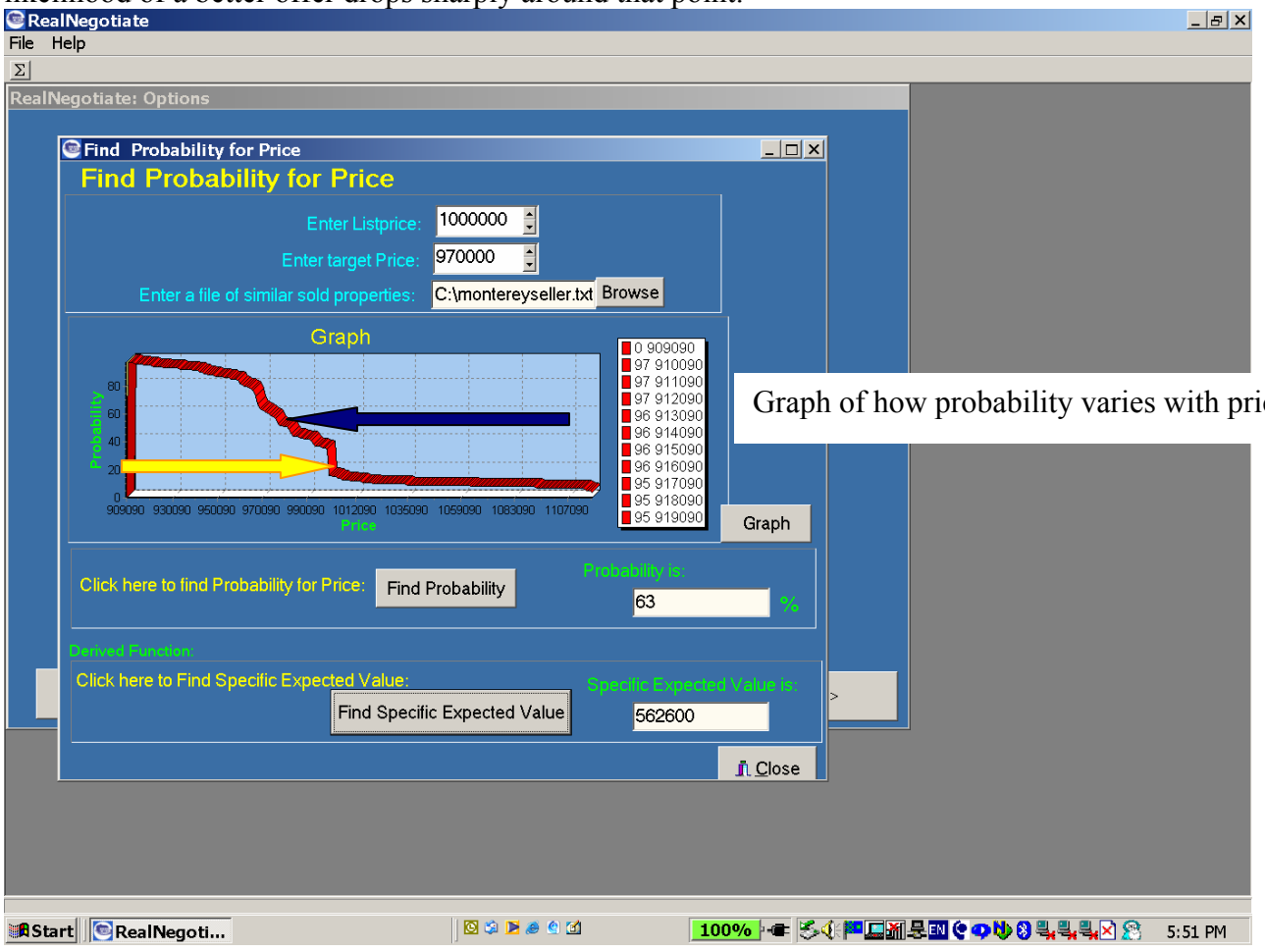
- Probability: The likelihood of the event occurring. In this report, probability is a % value from 1% to 99%. A higher probability is generally preferred, as it means that your goal is more likely to actually be achieved.
  For example, "What is the likelihood (probability) of selling at $950,000?"
- Time: This is the number of days to get the sale. Depending on the data you provide, and the info you request, this may or may not include days on escrow. For example, if you send us a CMA which includes both days on market and days on escrow, and specifically request that we analyze time as the days from the property listing until close escrow, we can do that. In this example, we are working with days on market only.
- Price: This is the sales price of the property. We use "Price" for short, rather than "Sales Price"
- List Price: This is the price that the property is currently listed at.
- Expected Value: This is the balance between Probability and Price. Ideally, the seller wants the highest number here, as that indicates a point where there is a good balance, in terms of having a price that is both rewarding *and* likely to be received.
  For example, a very low price has high probability (as buyers prefer to purchase at discount), but is not rewarding. A very high price is rewarding, but has low probability (this is the "winning the lotto" scenario). Obviously, we strive for the point somewhere in between, that is both likely and rewarding. The math: Expected Value is essentially price multiplied by probability. Why: This is a quick way to show the "bottom line" of the trade-off between price and probability.

ANALYSIS

1. **Given the current list price, what is the probability of selling at $970,000?**

Figure 1 shows that there is only a 63% probability of selling at that sales price. As this is a relatively low probability, in the next step we will see what happens when we are willing to accept a slightly lower sales price.

Before doing so, we should understand the information presented by the graph, as that will help us to adjust our price. The graph shows how probability varies with price. The lower prices have a high probability (as there are more people willing to buy your home at a lower sales price) and then there is a drop off, which flattens out (the decrease in probability "slows down") at the higher prices. There is a sharp drop right at list price, highlighted by the yellow arrow below, indicating that if the seller has an offer that is just below list price, they should take that offer rather than waiting for a higher one, as the likelihood of a better offer drops sharply around that point.



Graph of how probability varies with price

Figure 1. Probability for Price at our initial list, target sales price

Note that in the area of the graph where our target price ($970,000) is located, every decrease in sales price gives a substantial increase in probability, as we are in the region where the graph is sloping downwards, almost in a straight diagonal line (this area is highlighted by the dark blue arrow). This means that it may make sense to decrease our price, as a decrease in price in this area may lead to a greater increase in probability.

Advanced: This trade-off between price and probability is shown as a one-line number in "Specific Expected Value", which is essentially the price weighted (multiplied) by probability, less any expenses (expenses of sale, etc, that the user specifies), at this specific price/probability combination. This represents "what the seller will get" when they consider not just the price, but also the *likelihood of actually selling at that price.* This is a quick way to show the "bottom line" of the relationship for the tradeoff between price and probability. For example, if we reduce the target sales price, and the probability of sale increases relatively more than the price decreases, we have a higher expected value, i.e., a more effective price. Ideally, the seller wants the highest number here, as that indicates a point where there is a good balance, in terms of having a price that is both rewarding *and* likely to be received.

2. What is the probability of selling at a slightly reduced target sales price?

Given that the probability is relatively low, perhaps lowering the target sales price (to get a higher probability) would be a more effective pricing strategy. In other words, we will get more from the transaction by lowering the price, to one that we are more likely to actually receive (as there are significantly more buyers at the slightly lower price). **After we reduce our target sales price to $960,000, we see that the probability of sale at this price is much higher, at 82%. A relatively minor decrease in the minimum offer we will accept (from $970,000 to $960,000) gives us a much better probability of sale (82% rather than 63%), as there are more buyers willing to make the reduced offer.**

Our probability increase is greater than the price decrease, meaning we have a better balance between price and probability. Note that by decreasing our price by just $10,000, the higher probability of sale has led to an Expected Value increase of over $170,000.

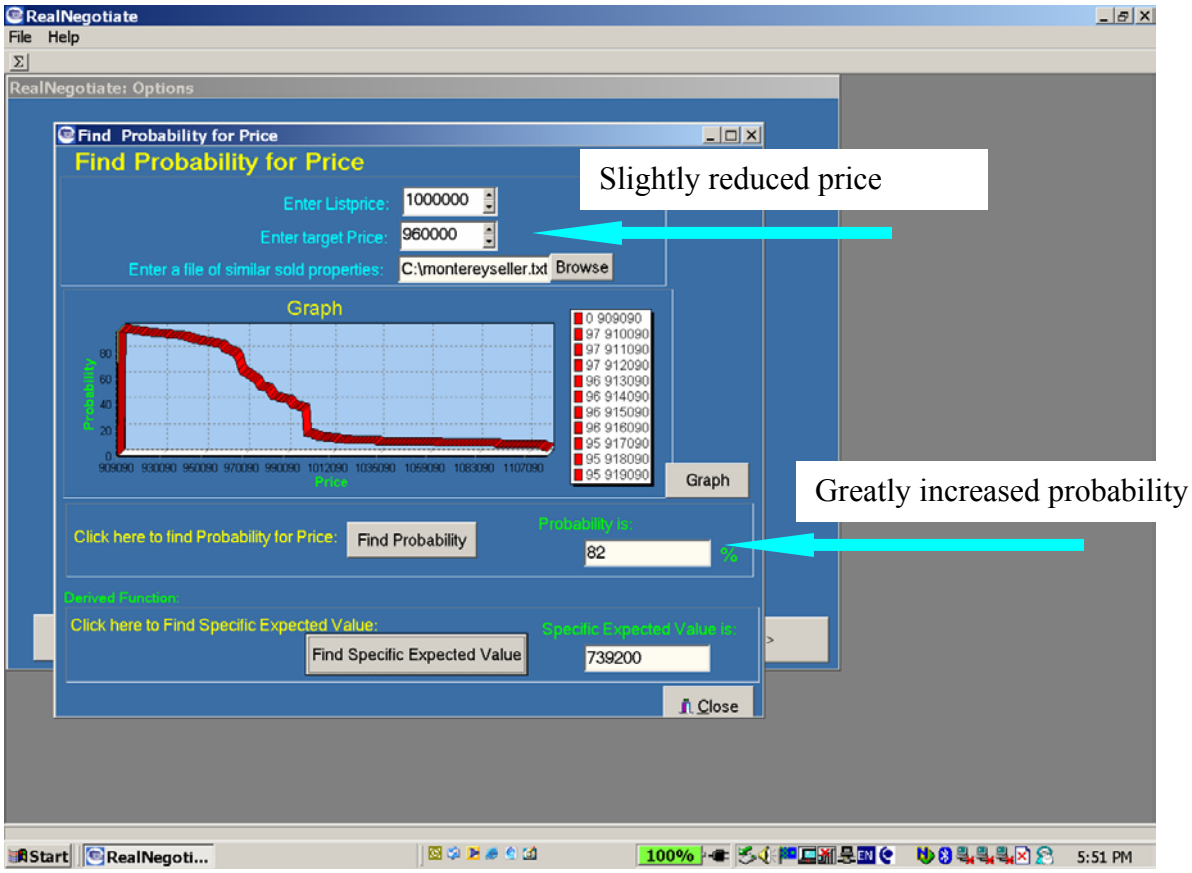


Figure 2. Probability of sale at a slightly reduced target sales price is much higher

3. What if we change the list price? Will a decreased list price give us a higher probability of selling at our target?

If we were to adjust the list price downward, would that increase the probability of selling at our target sales price? Intuitively, we may assume that this would be the case, as more buyers would consider a home that is listed somewhat lower. However, sometimes the actual behavior of the market, and thus the sales data, is different from what one would expect. For example, as shown in Figure 3, when we reduce the list price and keep our target sales price constant, we note that we actually have a decreased probability of **selling at our target sales price.** The key is not just selling the home, but selling within the price target. The reason for the decrease is that the price differential (the ratio of list price to sales price) is increased at the lower list price. In other words, the buyer would receive less of a % discount when the list price drops and the target sales price remains constant. We would be more likely to receive a lower offer, as the buyer expects a certain level of discount when purchasing the property, but would be less likely to receive an offer **at our target sales price**. In this particular market, the data indicates that homes tend to "over list", sit on the market for a while, and then sell much later, often at a significant price reduction. Rather than working against the trend of the market, we should be aware of the discount expectation on the buyer's part, and list accordingly. Thus we conclude that for selling at our target sales price (i.e., where selling at our target

price is a priority) a reduced list price is probably not going to be in our favor. Instead, we should **determine the offer to accept, as we will show in the following analysis.**

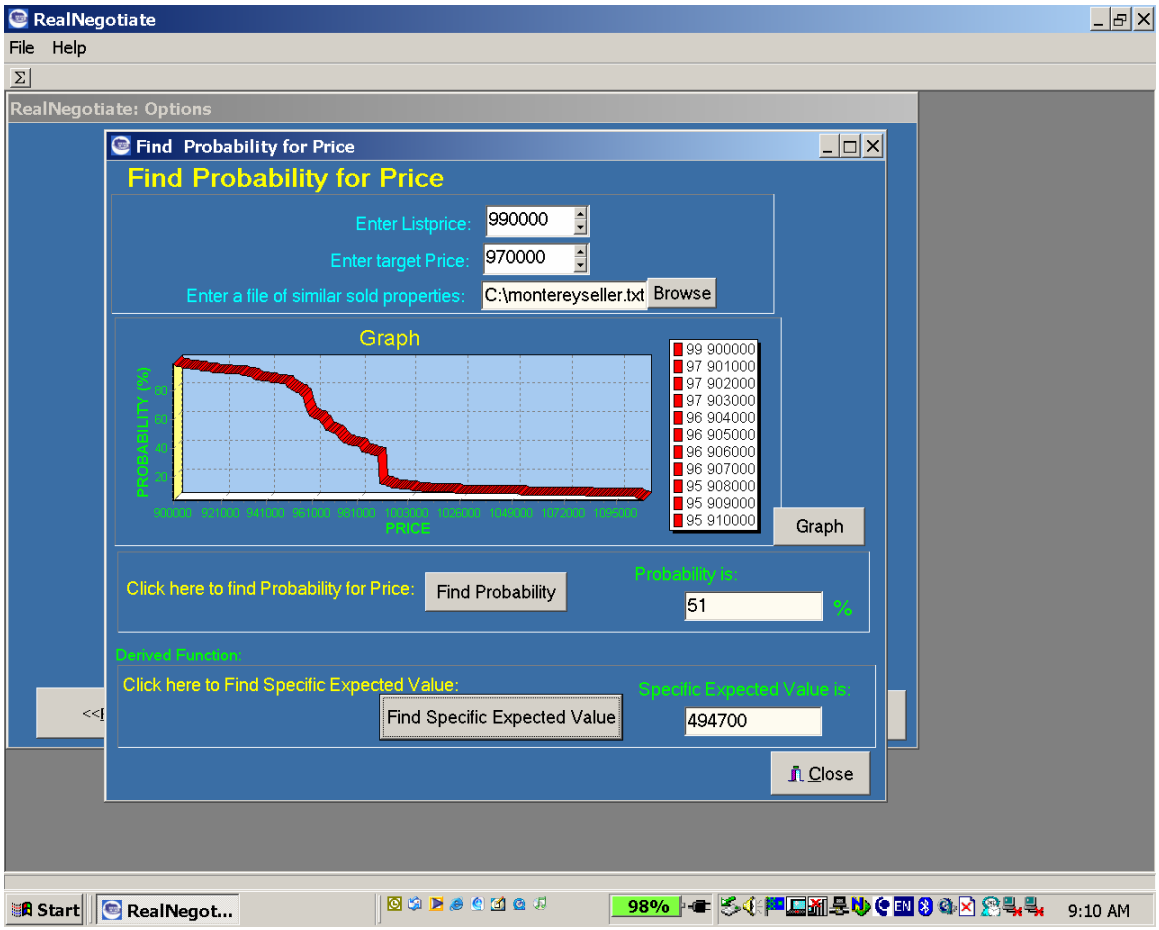


Figure 3. Reduced list price represents a higher price differential at our target sales price

4. Days to sale: Given the number of days the house has been on the market so far, how quickly will it sell at our target price?

If time IS an issue, for example, if the seller is considering purchasing another home "pending sale" of the one they currently own, let's consider how quickly we would sell. We can look at different price levels. This also gives us an idea of when the higher offers will occur, and thus when to accept an offer and when to wait for a higher one.

If we look at our reduced target price of $960,000 (Figure 4a), we note that the probability of sale is 82% (as when determining probability for price, in Section 2), but now the element of time is added. The time to sale is within about 133 days from today.

If we look at a significantly lower price than our target (say, $950,000), we note that we have a high probability of selling at this price (almost 90%), but that there is a relatively long time to sale, longer than at $960,000. To interpret this, note that the graph in Figure

4b shows that the homes selling at the lower price levels (i.e., at the greater discounts on list price) tend to sit on the market longer. The reason for this is that the homes in the left portion of the graph were priced unrealistically (over-listed), so they sat on the market for an extended period of time, and the sellers eventually had to accept lower (more reasonable) offers in order to sell.

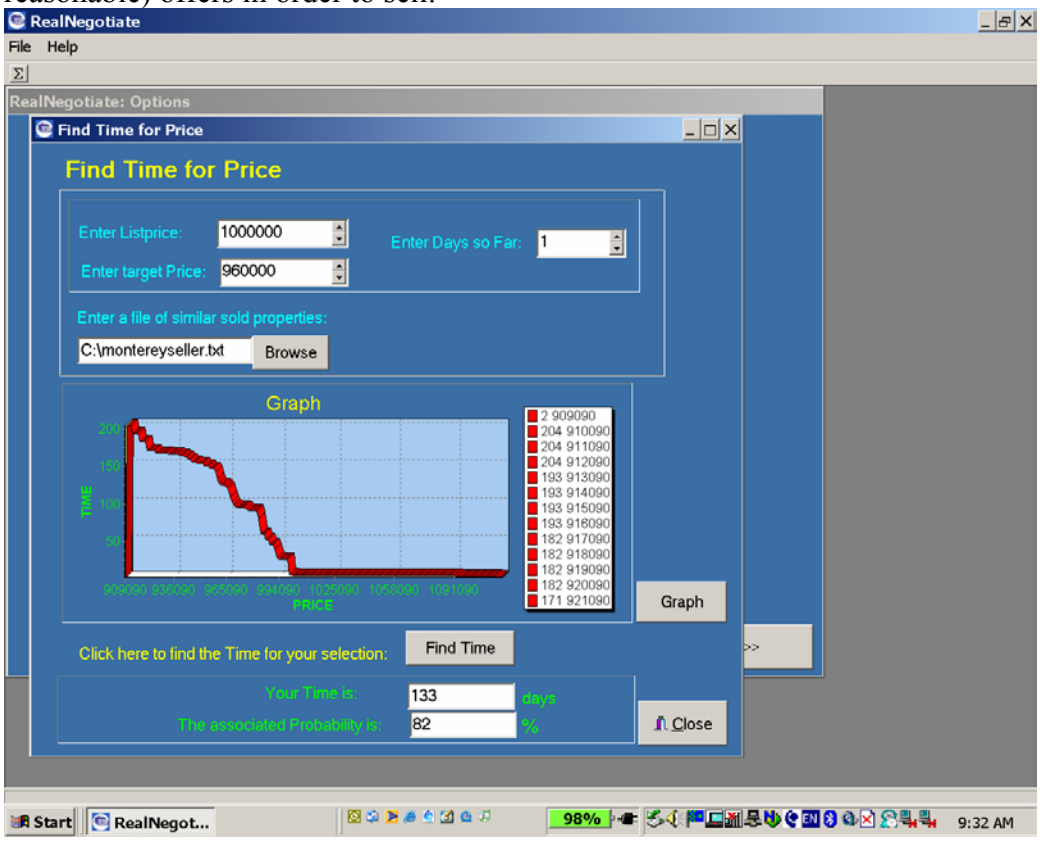


Figure 4a. How time-to-sale varies with price, at our adjusted target sales price

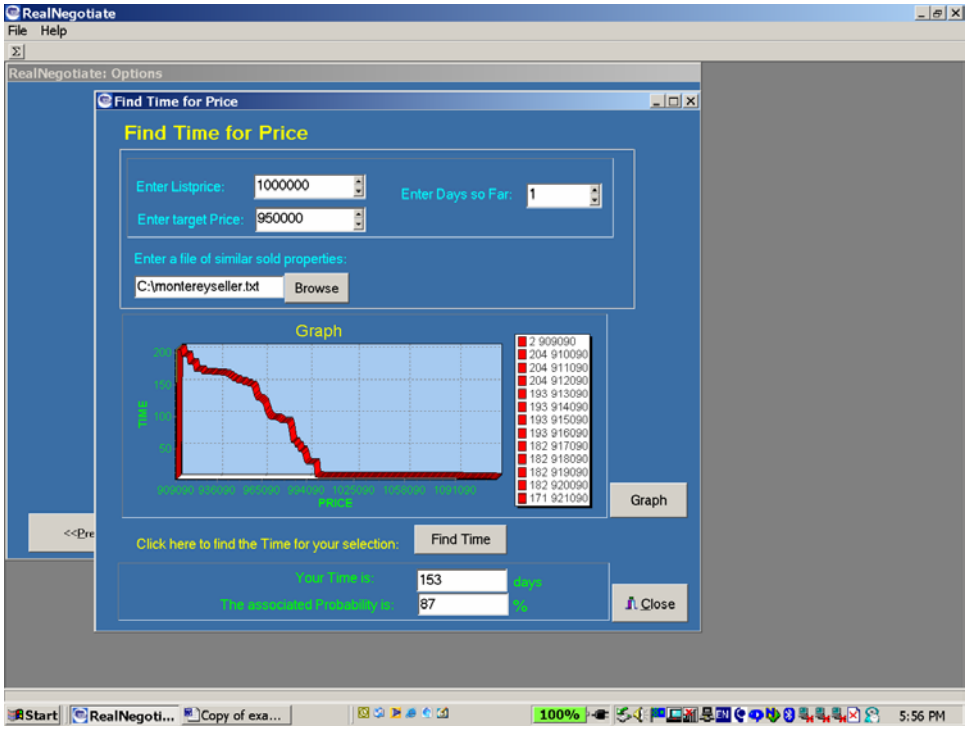


Figure 4b. How time-to-sale varies with price, significantly reduced price

In Figure 5 below, we have increased our target sales price to $970,000, its initial value. The results show that a higher offer is less likely**, but if we're going to get one, it'll happen sooner rather than later (in other words, as noted above, homes that sit on the market for a long time drop in price). Alternately, if we have not received a $970,000+ offer within this timeframe, it probably won't happen.**

This reinforces the conclusion above: After a while, homes that sit on the market for a long time are to some extent "stigmatized", and a significant discount is expected by buyers, in this type of market. **Thus our target should be to sell within a reasonably high offer received within the first 100 days on market, as the higher offers are likely to occur during this time period.**

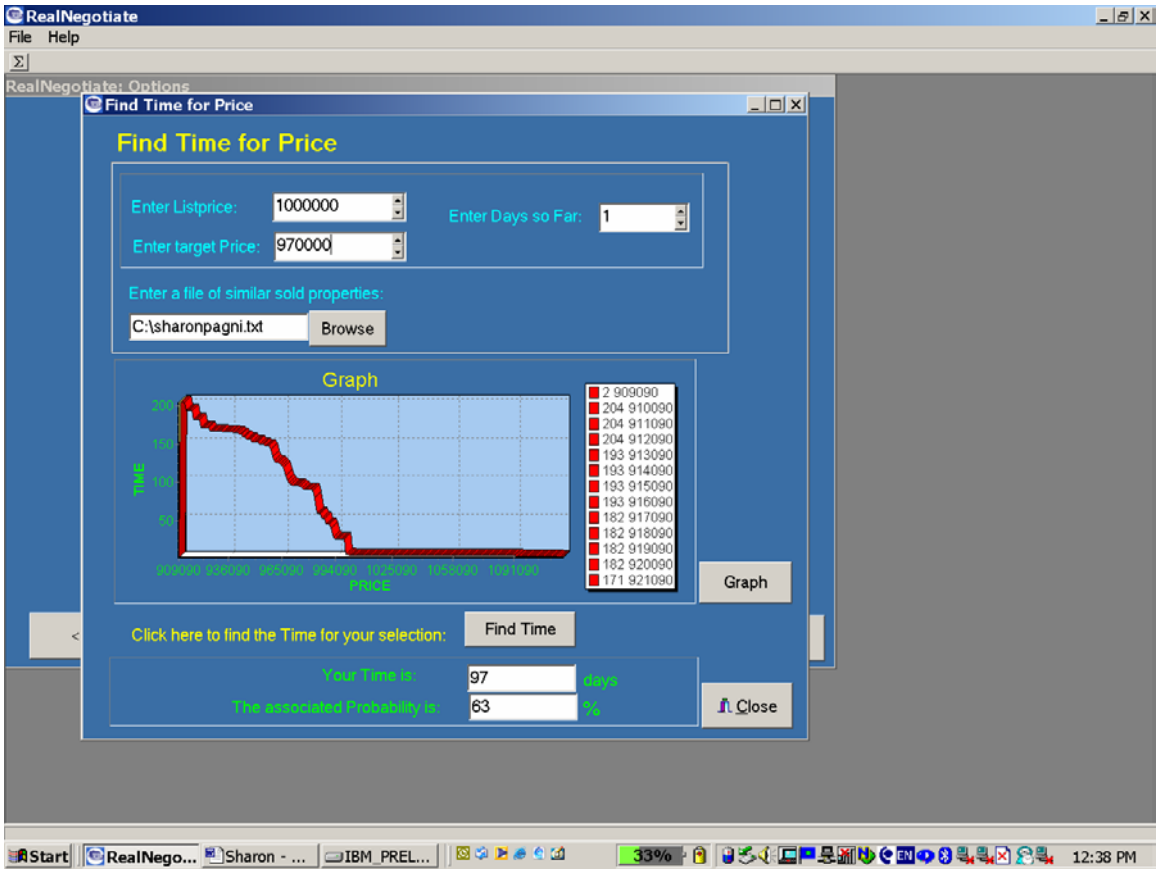


Figure 5. Higher offers will be sooner rather than later

5. Conclusions

The conclusion from the market data is that this type of market (the Monterey example) is one where properties of this type are listed at a high price, tend to sit on the market for a relatively long time, and then have to accept a significantly lower offer actually sell. The higher offers in the $970,000+ range, are of relatively low probability (around 63%), but if they do occur, it will be when the property has been on the market for a relatively short time (about 100 days or less in this market). Thus it is recommended that a seller should accept an offer in that range, if one is made within that timeframe. We can be relatively confident (about 82%) of selling at $960,000+, and very confident (nearly 90%) at $950,000+, but the longer the property sits on the market, the less likely we are to receive the higher level offers.

In other words, the seller should accept a high offer ($970,000+) when provided, as this will probably occur within the first 100 days on market. If no such offer is made and the property continues to sit on the market, the seller has 82% probability of receiving a sales price of $960,000, which would happen around 130 days from today. We recommend that the seller accept an offer in this range.