

Figure 6.1 Efficient Markets Versus Real Estate Markets

Efficient Markets

Goods and services are very similar and can be substituted for one another, e.g., gasoline, shares of stock in a company, a bottle of any brand name soft drink, paper clips.

The quality of goods is standardized or similar, e.g., a loaf of bread, a bottle of milk.

There are many buyers and sellers, which prevents any one person from influencing the market too much, e.g., the New York Stock Exchange, an automobile auction.

Efficient markets are self-regulating because there are many buyers and sellers. Market behavior is hard to hide, e.g., gasoline sales.

Supply and demand are never too far out of balance because there are so many buyers and sellers. When supply is too high and prices fall, bargain hunters come in to absorb the excess inventory. When prices are too low, the supply is absorbed and sellers can raise prices.

Buyers are knowledgeable and fully informed about market conditions, e.g., the gasoline market, a grocery store.

Buyers and sellers are brought together in a formal system to facilitate the sale, e.g., the New York Stock Exchange.

Goods are readily consumed and easily transported. If they are difficult to transport, market demand in one area cannot be used to satisfy oversupply in another. For example, the market for 75-foot boats will never be efficient because they are too hard to move from one place to another. In some markets, the cost of transportation will inhibit shopping in another area.

Real Estate Markets

Real or perceived differences in locations, school systems, proximity to services, and other issues make real estate too unique to be easily compared for pricing purposes. Comparisons may be easier in some residential markets.

The quality of improvements on real estate varies from a cardboard shack to the Biltmore Mansion. Differences in quality make direct comparisons difficult.

For popularly priced homes there are many buyers and sellers, but for regional shopping centers, mobile home parks, funeral homes, and sand and gravel mines, there are only a few players and, thus, prices may vary from transaction to transaction. Many market participants give buyers and sellers more options.

Real estate is highly regulated, e.g., licensing of certain market participants. Real estate fraud is common in many markets. Even the most professional real estate appraisers and brokers can be tempted to do unethical things because they see so many people getting wealthy doing it. In the long run, the bad guys get their just desserts.

In real estate, supply and demand are constantly out of balance. The demand for frontage property on a busy commercial street may be extremely high and the supply is limited. If new homes are in short supply in a residential market, builders cannot just throw up another unit. It takes months and sometimes years to satisfy the demand for some types of real estate.

In many real estate markets, the only knowledgeable people in the transaction are the brokers and, after the sale, the appraiser. Because buyers are sometimes misled, many mistakes can be made.

The closest thing to a formal system for bringing real estate buyers and sellers together is the Realtors' MLS system. The Internet might replace this system in the future by bringing buyers and sellers together directly.

Real estate is one of the most durable commodities in American society. Some buyers of single-family homes buy a new home at age 25 and never buy any more real estate until they are 65 years old. Property is fixed in location so if the price of real estate is too high in one location, you cannot pick it up and move it to a better area. It is not very efficient from that perspective. Some real estate is so specialized in design there is no active resale market.

Figure 6.2 Mortgage Types, Terms, and Definitions

Blanket mortgage	A mortgage that covers more than one property; common in subdivision development and in situations where the equity in one property is insufficient to satisfy loan policy. Usually individual properties are released from the blanket mortgage as they are sold, and part of the balance of the blanket mortgage is paid off.
Interest-only mortgage	A mortgage loan in which the borrower only pays the interest. The payments do not lower the principal amount at all during the term of the loan.
Direct reduction mortgage loan	The most commonly used mortgage whereby the principal repayment starts out slow but gets larger as the loan gets older and the interest charges diminish.
Adjustable rate mortgage (ARM)	A mortgage in which the interest rate is not fixed over the full term. This enables the lender/investor to increase its yield if the rates go up. While the payment may be fixed for a few years, it can change when the rate changes.
Wraparound mortgage loan	A mortgage loan in which the lender assumes an existing mortgage and then adds some new money to make the principal amount large enough for most buyers to assume. Because the lender is blending the older (and presumably lower) interest rate with a newer (and presumably higher) interest rate, the borrower enjoys a rate lower than would normally be possible.
Participation mortgage loan	A mortgage loan type sometimes used for non-residential properties to allow the lender to retain more of the ownership interest. This means a lender will be paid a payment that includes a share of the periodic income and sometimes the increase in the resale value of the property.
Shared appreciation mortgage loan	A mortgage program in which the lender agrees to give a lower interest rate in return for a portion of the increase in the appreciation of the real estate (if any). This type of loan is applicable only to some properties.
Convertible mortgage	Instead of receiving a principal payment each period, the lender may take an ownership interest in the property. This means the lender becomes one of the owners over the life of the mortgage loan.
Graduated payment mortgage loan	A mortgage loan in which the payments are less than required to pay off the loan in the beginning and increase in later years. These loans were thought to be a good tool because a borrower's income usually increases in later years when a larger payment is more affordable. These loans have higher risk because the loan amount gets bigger in the first few years, and if there is no appreciation in property values, the borrower owes more than the property is worth.
Zero coupon mortgage loan	Debt with no interest or principal payments being made. The interest accrues against the real estate, which means the balance gets higher as the loan gets older. This type of loan is very risky unless there is substantial equity.
Reverse annuity mortgage loan	A lender's tool used to slowly extract equity from a property to supplement a person's income. Property owners who owe little or nothing on a property can borrow the same amount of money each month on a schedule. The interest and principal get bigger each month, but the borrowers do not care because they are looking for periodic income, not resale at the end of the term, when they are presumed to be too old to need the property.
Conditional sales contract	Not really a mortgage, but a signed contract in which the seller agrees that the title will pass to the buyer when the buyer pays off the loan on the property. This means the seller holds the deed while the monthly payments are made and until the debt is repaid.
Purchase-money mortgage	Another seller-financing contract in which the title is transferred to the buyer like a standard mortgage with the lender as the prior owner. This tool allows sellers to make the deal work but to keep the paper and maintain the right to foreclose.

Mortgage Exhibit 1

To calculate a mortgage payment, use the following formula. Mortgage payments can also be calculated easily on most financial calculators. In this mortgage loan calculation formula, I = the periodic interest rate and N = the number of payments. The resulting amount should be multiplied by the amount loaned to get the periodic payment. The formula for calculating a monthly mortgage payment is

$$\frac{I}{1 - (1/(1 + I)^N)}$$

What is the monthly payment for a 7%, 30-year mortgage with an initial amount of \$100,000?

$$\begin{aligned} I/12 &= 0.00583333 \\ N &= 360 (30 \times 12) \\ I/(1 - (1/(1 + I)^N)) &= \text{payment factor} \\ 0.00583333 / (1 - (1/(1 + 0.00583333)^{360})) &= \\ 0.00583333 / (1 - (1/0.811640064)) &= 0.00583333 / (1 - 0.12320732) \\ 0.00583333 / 0.875679268 &= 0.006653303 \\ 0.006653303 \times \$100,000 &= \$665.30 \end{aligned}$$

Mortgage Exhibit 2

Listed below is an amortization schedule for a small mortgage. Notice the direction of the change in interest and principal. The loan is amortized on a monthly basis.

Principal amount	\$25,000	Mortgage term	60 months		
Interest rate	7.00% per annum	Payment	\$495.07		
	Balance	Payment	Interest	Principal	Balance
1	\$25,000.00	\$495.03	\$145.83	\$349.20	\$24,650.80
2	\$24,650.80	\$495.03	\$143.80	\$351.23	\$24,299.57
3	\$24,299.57	\$495.03	\$141.75	\$353.28	\$23,946.29
4	\$23,946.29	\$495.03	\$139.69	\$355.34	\$23,590.94
5	\$23,590.94	\$495.03	\$137.61	\$357.42	\$23,233.53
6	\$23,233.53	\$495.03	\$135.53	\$359.50	\$22,874.03
7	\$22,874.03	\$495.03	\$133.43	\$361.60	\$22,512.43
8	\$22,512.43	\$495.03	\$131.32	\$363.71	\$22,148.72
9	\$22,148.72	\$495.03	\$129.20	\$365.83	\$21,782.89
10	\$21,782.89	\$495.03	\$127.07	\$367.96	\$21,414.93
11	\$21,414.93	\$495.03	\$124.92	\$370.11	\$21,044.82
12	\$21,044.82	\$495.03	\$122.76	\$372.27	\$20,672.55
13	\$20,672.55	\$495.03	\$120.59	\$374.44	\$20,298.11
14	\$20,298.11	\$495.03	\$118.41	\$376.62	\$19,921.49
15	\$19,921.49	\$495.03	\$116.21	\$378.82	\$19,542.66
16	\$19,542.66	\$495.03	\$114.00	\$381.03	\$19,161.63
17	\$19,161.63	\$495.03	\$111.78	\$383.25	\$18,778.38
18	\$18,778.38	\$495.03	\$109.54	\$385.49	\$18,392.89
19	\$18,392.89	\$495.03	\$107.29	\$387.74	\$18,005.15
20	\$18,005.15	\$495.03	\$105.03	\$390.00	\$17,615.15
21	\$17,615.15	\$495.03	\$102.76	\$392.27	\$17,222.88
22	\$17,222.88	\$495.03	\$100.47	\$394.56	\$16,828.31
23	\$16,828.31	\$495.03	\$98.17	\$396.86	\$16,431.45
24	\$16,431.45	\$495.03	\$95.85	\$399.18	\$16,032.27
25	\$16,032.27	\$495.03	\$93.52	\$401.51	\$15,630.76
26	\$15,630.76	\$495.03	\$91.18	\$403.85	\$15,226.91
27	\$15,226.91	\$495.03	\$88.82	\$406.21	\$14,820.70
28	\$14,820.70	\$495.03	\$86.45	\$408.58	\$14,412.13
29	\$14,412.13	\$495.03	\$84.07	\$410.96	\$14,001.17
30	\$14,001.17	\$495.03	\$81.67	\$413.36	\$13,587.81
31	\$13,587.81	\$495.03	\$79.26	\$415.77	\$13,172.04
32	\$13,172.04	\$495.03	\$76.84	\$418.19	\$12,753.85
33	\$12,753.85	\$495.03	\$74.40	\$420.63	\$12,333.22
34	\$12,333.22	\$495.03	\$71.94	\$423.09	\$11,910.13
35	\$11,910.13	\$495.03	\$69.48	\$425.55	\$11,484.58
36	\$11,484.58	\$495.03	\$66.99	\$428.04	\$11,056.54
37	\$11,056.54	\$495.03	\$64.50	\$430.53	\$10,626.01
38	\$10,626.01	\$495.03	\$61.99	\$433.04	\$10,192.96
39	\$10,192.96	\$495.03	\$59.46	\$435.57	\$9,757.39
40	\$9,757.39	\$495.03	\$56.92	\$438.11	\$9,319.28
41	\$9,319.28	\$495.03	\$54.36	\$440.67	\$8,878.61
42	\$8,878.61	\$495.03	\$51.79	\$443.24	\$8,435.37
43	\$8,435.37	\$495.03	\$49.21	\$445.82	\$7,989.55
44	\$7,989.55	\$495.03	\$46.61	\$448.42	\$7,541.13
45	\$7,541.13	\$495.03	\$43.99	\$451.04	\$7,090.09
46	\$7,090.09	\$495.03	\$41.36	\$453.67	\$6,636.42
47	\$6,636.42	\$495.03	\$38.71	\$456.32	\$6,180.10
48	\$6,180.10	\$495.03	\$36.05	\$458.98	\$5,721.12
49	\$5,721.12	\$495.03	\$33.37	\$461.66	\$5,259.46
50	\$5,259.46	\$495.03	\$30.68	\$464.35	\$4,795.11
51	\$4,795.11	\$495.03	\$27.97	\$467.06	\$4,328.05
52	\$4,328.05	\$495.03	\$25.25	\$469.78	\$3,858.27
53	\$3,858.27	\$495.03	\$22.51	\$472.52	\$3,385.75
54	\$3,385.75	\$495.03	\$19.75	\$475.28	\$2,910.47
55	\$2,910.47	\$495.03	\$16.98	\$478.05	\$2,432.42
56	\$2,432.42	\$495.03	\$14.19	\$480.84	\$1,951.57
57	\$1,951.57	\$495.03	\$11.38	\$483.65	\$1,467.93
58	\$1,467.93	\$495.03	\$8.56	\$486.47	\$981.46
59	\$981.46	\$495.03	\$5.73	\$489.30	\$492.16
60	\$492.16	\$495.03	\$2.87	\$492.16	\$(0.00)