Understanding Real Estate Risk-Return

The Real Estate Investment Environment

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Investment Environment

I - RE Micro Economics
II - Basic Legal for RE
III - Basic Tax for RE
I - RE Micro Economics

Real Estate is a "Real" Market

✓ A Place of Trade
  - For goods & services
  - With buyers & sellers
  - Where supply & demand meet

✓ With Equilibrium
  - At certain prices
  - For certain volumes of traction

✓ With 2 types of Tactions
  - Letting
  - Investment

Source: DR
“Controlled” market and shortage

✔ Rental Housing
  - Tenants more protected than landlords
  - Rent controlled, not “marked-to-market”
  - Or fixed rent (social housing)

✔ Demand
  - Basically strong...
  - ... even stronger with cheaper rent

✔ Supply
  - Basically limited...
  - ... even shorter due to negative incentive

Demand
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Supply
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Cobweb Curve

✔ Context
  - Supply and Demand normally expressed...
  - ... but adaptation affected by production delay

✔ Pig Price Curve
  - 6 weeks market adaptation (necessary to adjust production)
  - Producers arrive to Market with a rigid pre-determine supply, that can’t change in short term
**"Pig Curve" For Parisian Flats**

**Context**
- At Market bottom, volumes increase...
- ... then prices increase...
- ... then volumes decrease...
- ... and Prices decrease

**Rationale**
- Vendors are not immediately forced to sale
- Supply adaptation is marginal

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**Thünen: the "Isolated State"**

**Optimal Agricultural Land Use (1826)**
- Based on distance from the City...
- ... and transport costs
- From high to low market value

**Microeconomics**
- Supply is widespread
- Demand is centralized
- A linear function:
  \[ R = Q (P - TC - x t) \]
- Rent = Quantity * (Price - Total Costs - Distance * Transport Costs)

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*Source: DR*
Alonso: the Bid Rent Function

✓ A Bid price Curve (1964)
  - Combinations of land prices and distances rendering indifferent.
  - Showing rent to pay at each distance to achieve a predetermined utility level.

✓ Specificities
  - Specific Bid price curve for each customer.
  - Specific utility level for each bid price curve.

Real Market: doubt & uncertainty

✓ Asymmetry of Information
  - Between vendor and buyer.
  - Among buyers.
  - Among vendors.

✓ Traction Costs
  - Buy and re-sell at same price => you lose money.

✓ Unpredictable Behavior
  - Bounded rationality.
  - Non cooperation.
  - Cheating.

Source: DR
$100 Bill Auction

- Simple global auction
  - Highest bid wins
  - Outcome = bid-100
  - Cents matters

- One-to-One Duals
  - Bids are compared on dual-fight basis
  - Outcome = (bid-100) x number of victories
  - Outcome depends on Group’s behavior

- Shubik’s $Auction
  - Irrational escalation commitment
  - Miscalculation of Expected value

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Auction Theory: Private Value

- Good Example of Free Market
  - Perfect competition
  - From watches on E-Bay to Bandwidth sold by government
  - Flexible tool

- Rationale
  - Initially price based on resale value
  - Vickrey’s vision: different people have different values

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**Auction Theory: Common Value**

- **Known Value**
  - The asset value is approximately the same for all bidders.
  - However, it remains impossible to assess this “Common Value.”

- **The Winner’s Curse**
  - Real value equals common value plus a spread (spread could be positive or negative).
  - Only good if \( \epsilon \) max <= 0.

- **Common Value**
  
  \[
  \text{Real Value} = V + \epsilon \\
  (\epsilon = \text{margin of error})
  \]

  - If \( \epsilon \) max = b, winner is b.

**Asymmetry of Information**

- **Market For Lemons**
  - Seller’s incentive to exaggerate asset quality or to sell first low quality assets.
  - Buyers are prone to anticipate bad quality (due to asymmetric information).
  - Example: used cars market, lemons vs. cherries.

- **Solutions**
  - Credible disclosure technology limiting asymmetry.
  - Insurance and warranty.

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Herbert Simon: Bounded Rationality

**Wrong Model**
- Perfect Market with omniscient actors, able to “rationally” compute each decision and its consequence
- Real Life with imperfect information, limited computation, strong interdependence

**Organizational Decision-Making**
- Management of information is complex and costly
- Multiple Utility functions

Game Theory: Chicken

**Toward the Cliff Or Toward Each Other**
- The first to jump is the “Chicken” (Jimmy)
- The second to jump is victorious...
- ... if not dead (Buzz).

**Nash Equilibrium**
- Knowing the other strategy, no interest to change if the other doesn’t
- In “Chicken, there is two “Nash Equilibria”
Contract Theory

✓ **Moral Hazard**
- Asymmetry of information renders actions unpredictable
- Protection against risk through incentives
- That could be costly

✓ **Adverse Selection**
- Insurance company (Principal) is not informed of driver’s behavior (agent)
- Bad drivers would be tempted to get a cheap insurance while making a lot of accidents
- Insurer should dissuade bad drivers

Decision Based On Historical

✓ **Limits of Lognormal Distribution**
- Gauss curve is not always relevant
- Dispersion around average could be hectic
- Poisson’s distribution: discrete probability (noise & small occurrences)

✓ **Pangloss View**
- “All is for the best in the best possible world…”

Unpredictable Trauma

Artificial Focus on “Best Case Only” (Pangloss View)
II - Basic Legal For RE

Market Players

✓ Property Owners
- Could be users (owners-occupiers)...
- ... or pure investor letting the premise (landlords)...
- ... or, for a short term period, developers who produces properties of the 2 first categories

✓ Property users
- Could be users (owners-occupiers)...
- ... or tenants

Lease: A contract by which (i) one conveys real estate, […], (ii) for a specified term and (iii) for a specified rent.

Rent: Fixed periodical return (i) made by a tenant or occupant of property to (ii) the owner (iii) for the possession and use thereof.

Source: Webster Dictionary
Lease Contract Main Terms

- **Duration**
  - Landlord commitment
  - Tenant commitment
  - Termination clauses (for tenant: breaks)
  - Right of renewal

- **Rent**
  - Fixed or mark-to-market (MTM)?
  - Indexation
  - "Tunnel" of protection against market

Lease Contract Duration

- **Most European lease contracts**
  - Are with mutual firm period
  - With indexed rents

- **Average Duration**
  - 5-10 years
  - French exception: 3-6-9 year lease
  - UK long term leases (sometime more than 20 years)

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**Number of years of firm commitment**

<table>
<thead>
<tr>
<th>From Tenant</th>
<th>From Landlord</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In France</strong></td>
<td><strong>In France</strong></td>
</tr>
<tr>
<td>✅ 3, 6 or 9 years</td>
<td>✅ 3, 6 or 9 years</td>
</tr>
<tr>
<td>✅ free (cf contract)</td>
<td>✅ free (cf contract)</td>
</tr>
<tr>
<td><strong>In UK</strong></td>
<td><strong>In UK</strong></td>
</tr>
<tr>
<td>✅ 5, 10 or 15 years</td>
<td>✅ 5, 10 or 15 years</td>
</tr>
<tr>
<td>According contract</td>
<td>According contract</td>
</tr>
<tr>
<td><strong>In Germany</strong></td>
<td><strong>In Germany</strong></td>
</tr>
<tr>
<td>✅ 5, 10 years</td>
<td>✅ 5, 10 years</td>
</tr>
<tr>
<td>According contract</td>
<td>According contract</td>
</tr>
<tr>
<td><strong>In Italy</strong></td>
<td><strong>In Italy</strong></td>
</tr>
<tr>
<td>✅ 6 years, or</td>
<td>✅ 6 years, or</td>
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<tr>
<td>According contract</td>
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<tr>
<td><strong>In Spain</strong></td>
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</table>

Right of renewal limiting MTM

Indexation + MTM @ end of contract every 5 years

Indexation + MTM @ end of contract (every 5 years)

Indexation
Rental Cycle

- 10 Year Cycle?
  - RE Cycles are linked to major economic cycles
  - Comparable with "Kitchin cycles" (investment in inventories)

- Rental Commitment
  - Landlord harvests "over-performance" if tenant commits at peak
  - Landlord gets stuck with "under-performance" if he commits at bottom

Rent Negotiation

- When market bottoms down
  - Today's rents reach historical low values, and fixture rents are expected to rise again
  - Power of negotiation in favor of tenant

- Concessions
  - Maintain a "fiscal" rent artificially high
  - Through rent-free period & works done for tenant
  - So on the duration of the lease, "economic" rent is attractive
Occupancy

✓ Physical
Occupancy
- Surface Let vs. Total space: here 70%
- Property may be concerned with "structural" vacancy

✓ Financial
Occupancy
- Total rent in place vs. maximum "potential" rent (if all space let @ market value): here 56%
- Complementary ratio, expresses 2 types of "vacancy"

LK - IHQDATE Nov. 2008
Occupancy Through Cycles

**Cycles Impact**
- Market rent variance
- Occupancy variance

**Positive Reversion**
- Space let at rent below current market
- Empty space to re-let

**Negative Reversion**
- Space let at rent above current market
- Occupied space to be vacated

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**Occupancy Dynamic 1/2**

**Occupancy:**
- Physical & Financial
  - Decrease in recession
  - Increase in boom

**Reversion**
- Positive when Market is booming
- Negative when market falls
Rent Maximization
- Organized vacancy...
- ...to reshape spaces and boost product

Cycle Movement
- Use Market boom to reposition product
- Capture rent mix through capex

III - Basic Tax For RE
Tax On Capital Gain

**Tax Basis**
- Net Disposal proceed...
- ... less Book value (historical price less amortization)

**Tax Rates**
- 20 to 33% (depending on countries, often comparable with income tax rate)
- Could be matched with losses (negative incomes)
- Exemptions: REITS

Tax Impact

**Investment**
- Asset bought 100
- Incomes: 25 in 5 years
- Disposal Proceed: 115
- Gross Profit: 40

**Transfer Tax Impact**
- Acquisition: +6 (additional expense)
- Disposal Proceed: -6.9 (proceed reduction)

**Profit Tax Impact**
- In Total: -6.8
- Income Tax: -6.3
- Capital Gain: -0.5
Acquisition Structuring

✓ **Investment Vehicle**
  - In Tax Efficient Jurisdiction
  - Limiting Tax on Capital Gain
  - Take a Mortgage

✓ **Financing**
  - Loan & Internal debt (quasi-equity) creating deductible interests
  - Limited by "thin capitalization" rules

✓ **Bi-Lateral Treaty**
  - Avoiding double taxation
  - Rendering certain countries attractive

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Bibliography

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