The U.S. Homebuilding Industry and The Competitive Position of Large Builders

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This presentation was prepared with the assistance of Catherine Turco, Harvard Business School. It draws on ideas from Professor Porter’s books and articles, in particular, Competitive Strategy (The Free Press, 1980); Competitive Advantage (The Free Press, 1985); “What is Strategy?” (Harvard Business Review, Nov/Dec 1996); “Strategy and the Internet” (Harvard Business Review, March 2001); and a forthcoming book. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of Michael E. Porter. Additional information may be found at the website of the Institute for Strategy and Competitiveness, www.isc.hbs.edu.
Overview

• Industry structure is a key driver of homebuilder profitability
  – This tends to be lost amidst attention on fluctuations in interest rates and housing starts

• Overall industry structure is becoming more attractive

• Large multi-regional builders enjoy significant and growing competitive advantages over smaller builders

• Market assessments of homebuilding stocks appear to be out of line with other industries that have similar structural characteristics
Agenda

- The Fundamentals of Industry Profitability and Competitive Advantage
- The Structure of the Homebuilding Industry
- The Competitive Advantages of the Large Homebuilders
- Market Assessments of Homebuilding versus Other Industries
- The Role of Investors in Strategy
The Economic Foundations of Competition
Setting the Right Goals

• The goal of a company is to create **economic value**, or the ability to command **prices greater than the full costs** of producing its goods/services.

• The only reliable test of economic value is **sustained profitability**, measured by **superiority in long-term return on investment**.

  • Other goals and metrics (e.g. revenue growth; eps growth; market share; return on sales; pro-forma earnings; cash flow) carry **grave risks** for strategy.

  • Prevalent accounting adjustments to reported profitability **obscure true economic performance** and can lead to bad competitive choices.
    – The risks of write-offs, merger accounting, ignoring amortization.

• Growth is good **only if superiority of ROIC is maintained**.

• Shareholder value is the **result** of real economic value and should not be the goal itself.
  – Setting strategy to attempt to influence stock price directly is fraught with danger.
The Economic Foundations of Competition

Determinants of Profitability

- The fundamental unit of strategic analysis is the industry
- Company economic performance results from two distinct causes:

  - Overall Rules of Competition
  - Sources of Competitive Advantage

- Strategy must encompass both
The Economic Foundations of Competition
Basic Economics of Strategy

Return on Invested Capital 1985-2002

Pharmacia & Upjohn* 19.55%
Southwest Airlines 12.75%

Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
* Prior to 1995, reflects Pharmacia only. Company was acquired in 2000 by Monsanto, which then changed its name to Pharmacia
Source: Compustat
The Economic Foundations of Competition
Basic Economics of Strategy

Return on Invested Capital 1985-2002

Pharmacy & Upjohn* 19.55%
Southwest Airlines 12.75%

Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
* Prior to 1995, reflects Pharmacia only. Company was acquired in 2000 by Monsanto, which then changed its name to Pharmacia
Source: Compustat
Profitability of Selected U.S. Industries

Average of the U.S. Economy: 11.6%

Return on Invested Capital, Average of 1985 – 2002

Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)

Source: Compustat and author’s calculations
Determinants of Long-Term Industry Profitability

- Threat of Substitute Products or Services
- Rivalry Among Existing Competitors
- Threat of New Entrants
- Bargaining Power of Suppliers
- Bargaining Power of Buyers
Differences in Profitability Within Industries
1985-2002

Semiconductor Industry

Intel
Micron
Texas Instruments
JDS Uniphos
LSI Logic
National Semiconductor
Advanced Micro Devices

Industry Avg = 18.9%

Average Return on Invested Capital, 1985 - 2002

Airline Industry

Southwest
Northwest
Delta
AMR Corp
Continental
UAL Corp
US Airways

Industry Avg = 5.1%

Average Return on Invested Capital, 1985 - 2002

Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
Source: Compustat and author’s calculations
Determinants of Relative Performance

Types of Competitive Advantage

- Differentiation (Higher Price)
- Competitive Advantage
- Lower Cost
Companies are collections of discrete activities, in which competitive advantage resides.
Defining the Geographic Scope of Competition

- **Local**
  - Competition occurs primarily within local markets

- **Regional**
  - Competition occurs primarily within regional markets

- **National/Multidomestic**
  - Competition occurs primarily on a country-by-country basis (or within groups of neighboring countries)

- **Global**
  - A firm’s competitive advantage in one country is significantly affected by its position and activities elsewhere in the world

**Support Activities**
- Inbound Logistics (e.g. Incoming Material Storage, Data Collection, Service, Customer Access)
- Operations (e.g. Assembly, Component Fabrication, Branch Operations)
- Outbound Logistics (e.g. Order Processing, Warehousing, Report Preparation)
- Technology Development (e.g. Product Design, Testing, Process Design, Material Research, Market Research)
- Procurement (e.g. Components, Machinery, Advertising, Services)
- Human Resource Management (e.g. Recruiting, Training, Compensation System)
- Firm Infrastructure (e.g. Financing, Planning, Investor Relations)

**Primary Activities**
- Marketing & Sales (e.g. Sales Force, Promotion, Advertising, Proposal Writing, Web site)
- After-Sales Service (e.g. Installation, Customer Support, Complaint Resolution, Repair)

**Value**
- What buyers are willing to pay

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Determinants of Relative Performance

Operational Effectiveness

- Assimilating, attaining, and extending best practice

Run the same race faster

Strategic Positioning

- Creating a unique and sustainable competitive position

Choose to run a different race
Agenda

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• The Structure of the Homebuilding Industry

• The Competitive Advantages of the Large Homebuilders

• Market Assessments of Homebuilding versus Other Industries

• The Role of Investors in Strategy
Industry Profitability
Large Public Homebuilders

Return on Invested Capital
1985-2002

Average = 11.9%

Five-Year Trendline

Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
Source: Compustat and author’s calculations. Large Builders include BZH, CTX, DHI, HOV, KBH, LEN, MDC, MHO, NVR, PHM, RYL, SPF, TOL, WCI.
Profitability of Selected U.S. Industries

平均投资资本回报率，1985-2002年

- Prepackaged Software
- Pharmaceuticals
- Semiconductors
- Electromedical Apparatus
- Restaurants
- Surgical/Medical Instruments
- Computer Programming & Data Processing
- Homebuilding
- Telephone Communications
- Petroleum Refining
- Motor Vehicles
- Trucking
- Motor Vehicle Parts & Accessory
- Radio, TV Broadcast, & Comm Equipment
- Hotels & Motels
- Natural Gas Distribution
- Catalog & Mail-Order Houses
- Cable & Other Pay TV Services
- Steel Works & Blast Furnaces
- Airlines

平均利润率为11.9%

平均利润率为11.6%

注释：ROIC计算为EBIT除以平均投资资本（总资产减去多余现金减去流动负债）。

来源：Compustat和作者的计算。

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Trends in Industry Profitability
Large Public Homebuilders

Return on Invested Capital Trend
1972 to 2002

Note: Equation of the trendline: \( y = 0.0009x - 1.5887 \); \( R^2 = 0.0304 \)
Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
Source: Compustat and author’s calculations. Large Builders include BZH, CTX, DHI, HOV, KBH, LEN, MDC, MHO, NVR, PHM, RYL, SPF, TOL, WCI.
Trends in Industry Profitability
Large Public Homebuilders

Return on Invested Capital Trend
1985 to 2002

Note: Equation of the trendline: y = 0.0053x - 10.483; R² = 0.3369
Note: ROIC calculated as EBIT divided by Average Invested Capital (Total Assets less Excess Cash less Current Operating Liabilities)
Source: Compustat and author’s calculations. Large Builders include BZH, CTX, DHI, HOV, KBH, LEN, MDC, MHO, NVR, PHM, RYL, SPF, TOL, WCI.
Homebuilding Industry Structure
The Past

Bargaining Power of Suppliers

Capital
(-) Builders rely on funding from banks on a project-by-project basis; banks have historically withheld funding in downturns

Land
(+/-) Land purchase and entitlement are local activities

Labor
(+/-) Labor is supplied by local/regional subcontractors

Materials
(+/-) Most materials are purchased from local or regional suppliers

Rivalry Among Existing Competitors

No foreign competition
(+)
Lack of inventory discipline in the market leads to excess supply and competition on price
(-)
Lack of capital market discipline leads to overbuilding and competition on price
(-)
There are thousands of builders in the US, all of which are small, local or regional players

Bargaining Power of Buyers

(+), (-) Homes are differentiable as products, especially in certain segments
(+), (-) Many features are easily copied
(-), (-) Homes represent a major expense for buyers, making them concerned with price
(-), (-) Affordability is a main driver of demand and pricing and is a function of macro factors (e.g., interest rates and unemployment)

Threat of Substitute Products or Services

(-) Buyers can purchase an existing home or rent
(-) Buyers can improve their current home

Barriers to entry

(-) Barriers to entry are low
- Up-front capital costs and other barriers are not significant enough to stop entry
- Labor subcontracting and materials procurement are local activities
(-) The complexity of housing development is low
Homebuilding Industry Structure
Trends

**Threat of Substitute Products or Services**
- Long-term fundamental demand for new housing remains solid
  - Population growth is the primary driver of long-term demand
  - The real income and age of households are secondary drivers

**Rivalry Among Existing Competitors**
- No foreign competition
- Consolidation of the industry
- Growing share held by large public homebuilders
- Large builders provide greater inventory discipline in the market
- Larger home builders are competing directly in a growing number of markets

**Bargaining Power of Suppliers**
- Capital
  - S&L crisis has led to improved capital market discipline
- Land
  - Land is increasingly scarce in desirable markets
  - Entitlement is an increasingly complex and lengthy process in many markets
- Materials
  - Materials procurement is becoming more regional and national, not just local

**Bargaining Power of Buyers**
- Land/location become important differentiating factors, not just features of the house itself

**Barriers to entry**
- Barriers to entry are rising
  - The complexity of development is increasing, especially for large projects
  - Economies of scale in capital access are growing
  - Economies of scale in materials procurement are growing

**Average returns should be stable or trend upward**
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• The Role of Investors in Strategy
Profitability versus Size
400 Largest Builders

2002 Profit Margin

Builder Rank by Homebuilding Revenues

0% 2% 4% 6% 8% 10% 12% 14%

12.6%
10.0%
9.4%
8.4%

1-20 21-125 126-275 276-400

Source: Professional Builder “Giant 400”. Data refer to 2002 results.
## Overall Relative Cost Position

### Large versus Smaller Builders

<table>
<thead>
<tr>
<th></th>
<th>Builders 1-20</th>
<th>Builders 276-400</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Margin</td>
<td>26.8%</td>
<td>24.1%</td>
<td>Better 2.7%</td>
</tr>
<tr>
<td>SGA</td>
<td>12.5%</td>
<td>13.6%</td>
<td>Better 1.1%</td>
</tr>
<tr>
<td>EBIT Margin</td>
<td>14.3%</td>
<td>10.5%</td>
<td>Better 3.8%</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>1.7%</td>
<td>2.1%</td>
<td>Better 0.4%</td>
</tr>
<tr>
<td>Profit Margin</td>
<td>12.6%</td>
<td>8.4%</td>
<td>Better 4.2%</td>
</tr>
</tbody>
</table>

**Note:** Builders ranked by total housing revenue, excluding other businesses. Data refer to 2002 results.

**Source:** Professional Builder “Giant 400”.
Competitive Advantages of Large Builders

Materials Costs as % of Average Home Price

- Large homebuilders already enjoy a materials cost advantage relative to smaller builders.

Source: Professional Builder “Giant 400”. Data refers to 2002 results.
Competitive Advantages of Large Builders

Percentage of Large Builders who Purchase Direct from the Manufacturer

- Appliances: 55%
- Cabinetry: 45%
- Windows or patio doors: 30%
- Paint: 20%
- Carpet: 15%
- Locksets/Hardware: 10%
- Bath Fixtures: 10%
- Lighting: 10%
- Flooring: 10%


• Large homebuilders are still in the early stages of capturing their full advantages in procurement.
Competitive Advantages of Large Builders

Labor Cost

Construction Labor Costs as % of Average Home Price

Builder Rank by Housing Revenues

- Large homebuilders enjoy some labor cost advantages relative to most smaller builders

Source: Professional Builder “Giant 400”. Data refers to 2002 results.
Competitive Advantages of Large Builders

Access to Capital

• Small builders can access only bank credit
  – Access to bank credit is limited or dries up in economic downturns
  – At certain points in the economic cycle, however, the cost of short term bank debt may be less than that of corporate bonds with longer maturities

• Large builders can access both bank debt and corporate bonds
  – Use of both bank credit and corporate bonds together provides a less volatile source of capital than bank credit alone
  – Over the long-term, the cost of debt for large builders with public market access is likely to be lower than for smaller builders with access to bank credit only

• Large builders enjoy superior, more reliable capital access than smaller builders
Competitive Advantages of Large Builders

Land Supply

Examples of Statewide Growth Management

<table>
<thead>
<tr>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>Growth Management Act (1985) requires comprehensive, coordinated growth plans at state, regional and local levels. Urban Growth Boundaries optional. All metropolitan counties compliant by 1990.</td>
</tr>
<tr>
<td>Oregon</td>
<td>Growth Management Act (1973) requires comprehensive plans and Urban Growth Boundaries. All cities and jurisdictions had established growth boundaries by 1986.</td>
</tr>
<tr>
<td>Washington</td>
<td>Growth Management Act (1990) requires large, urban counties and cities to develop growth plans, align zoning requirements, and establish Urban Growth Boundaries. (29 of 39 counties participate)</td>
</tr>
<tr>
<td>Maryland</td>
<td>Smart Growth Act (1996) enables counties to establish Urban Growth Boundaries; most urban counties have done so.</td>
</tr>
<tr>
<td>California</td>
<td>No statewide mandate but Urban Growth Boundaries actively pursued locally (33 Urban Growth Boundary ballot measures from 1994-2000, nearly all of which passed)</td>
</tr>
</tbody>
</table>

- Regulation limiting the amount of developable land is increasingly prevalent in many major markets

Note: Urban Growth Boundary = a set of land-use regulations that prohibit urban development outside a certain boundary
Anderson, “Use and Implementation of Urban Growth Boundaries”, Center for Regional and Neighborhood Action, 1999
### Competitive Advantages of Large Builders
#### Land Supply - Continued

#### Housing Capacity of Undeveloped Land

<table>
<thead>
<tr>
<th>Southern California Coast</th>
<th>S.F. Bay Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 million units</td>
<td>1.7 million units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orange</th>
<th>Marin &amp; Napa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventura</td>
<td>San Mateo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Los Angeles</th>
<th>Yolo</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Diego</td>
<td>Contra Costa</td>
</tr>
<tr>
<td></td>
<td>Santa Clara</td>
</tr>
<tr>
<td></td>
<td>Alameda</td>
</tr>
<tr>
<td></td>
<td>Solano</td>
</tr>
</tbody>
</table>

- Land shortages are heavily due to regulation, not just to a lack of available land.

Source: California Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997–2020*, Exhibit 15. Capacity = (suitable land acreage) / (1996 housing density), by county. Suitable acreage excludes developed land, publicly owned land, underwater acreage, land with slope > 15%, wetlands, prime and unique farmlands, Q3 floodzones, and areas most suitable to large numbers of endangered species.
Competitive Advantages of Large Builders

Effect of Land Use Regulation

More land-use regulation, e.g., “Smart Growth”

- Less developable land
- Higher fees and exactions
- Slower process

More expensive land

- More capital-intensive entitlement

- Regulation limits the amount of developable land and increases land costs.
- Large public builders with larger staffs, greater capital access, and more patient capital have an advantage in heavily regulated markets.
Competitive Advantages of Large Builders

Geography and the Value Chain

Support Activities

- Firm Infrastructure (e.g. Financing, Planning, Investor Relations)
- Human Resource Management (e.g. Recruiting, Training, Compensation System)
- Technology Development (e.g. Product Design, Testing, Process Design, Material Research, Market Research)
- Procurement (e.g. Materials, Subcontracted Labor, Advertising, Services)

Primary Activities

- Land Acquisition & Development (Identify attractive markets, Secure land, Procure entitlements and permits, Prepare land for homebuilding)
- Construction (Design, Engineering, Schedule and manage construction process)
- Marketing & Sales (Lead generation, Model home display, Sales force, Customer selection of personalized options)
- Closing (e.g. Customer Financing, Contract, Title, Closing)
- After-Sales Service (e.g. Warranties, Customer surveys)

Value

What buyers are willing to pay

Margin
Competitive Advantage of Large Builders
Leveraging Geographic Scope

- While local scale remains important, many activities have become regional or national in scope providing advantage to regional and national builders
- The superiority in profitability of large builders is likely to grow
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### Comparing Homebuilding to Other Industries

#### Selected Analogies

<table>
<thead>
<tr>
<th>Industry</th>
<th>Similarities to Homebuilding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliances and Tools</td>
<td>Home construction is major demand driver</td>
</tr>
<tr>
<td>Auto and Truck Manufacturers</td>
<td>Expensive and infrequently purchased consumer durable; sensitive to interest rates</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>Home construction is major demand driver; limited international competition</td>
</tr>
<tr>
<td>Furniture and Fixtures</td>
<td>Home construction is major demand driver</td>
</tr>
<tr>
<td>Retailing</td>
<td>Sensitive to the economy; limited role of technology; little or no international competition</td>
</tr>
</tbody>
</table>
Market Assessment versus Sustained Profitability
Selected Industries

Price/Book v. ROIC
1991 to Present

Average ROIC

Average Price/Book

Note: ROIC calculated as EBIT / Average Capital. Median for S&P 1500 companies in industry.
Source: FactSet.
Market Assessment versus Sustained Profitability
Selected Industries

Price/Earnings v. ROIC
1991 to Present

Average ROIC

Average Price/Earnings

Autos and Trucks
Appliances and Tools
Construction Materials
Furniture and Fixtures
Retailing
Homebuilding

Note: ROIC calculated as EBIT / Average Capital. P/E calculated as Price / LTM Earnings. Median for S&P 1500 companies in industry.

Source: FactSet.
Market Assessment versus Sustained Profitability
Selected Industries

Price/Book v. ROIC
2000 to 2002

Average Price/Book

Average ROIC

Autos and Trucks

Construction Materials

Furniture and Fixtures

Appliances and Tools

Retailing

Homebuilding

Note: ROIC calculated as EBIT / Average Capital. Median for S&P 1500 companies in industry.
Source: FactSet.
Market Assessment versus Sustained Profitability
Selected Industries

Price/Earnings v. ROIC
2000 to 2002

Note: ROIC calculated as EBIT / Average Capital. Median for S&P 1500 companies in industry.
Source: FactSet.
Market Assessment versus Sustained Profitability
Industries in the S&P 1500 Universe

Price/Book v. ROIC
1991 - Present

Note: Universe includes S&P 1500 companies, excluding utilities and financial services. Industries with ROIC>20%, ROIC<5%, or P/B>6 not shown.

Note: ROIC calculated as EBIT / Average Capital. Median for S&P 1500 companies in industry.

Source: FactSet.
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Volatility of Returns

Standard Deviation of Year-Over-Year Change in ROIC

• Homebuilder ROIC is highly stable in comparison with other industries

Note: Universe includes S&P 1500 companies. ROIC defined as EBIT / Average Capital. Standard deviation of year-over-year change in ROIC (basis points) calculated for each company for each month from 1992 to date. Data then aggregated by industry by taking mean of the standard deviations calculated for each company in the industry. Excludes utilities, financial service companies, and industry groups with fewer than 5 companies.

Source: FactSet
Overview

• Industry structure is a key driver of homebuilder profitability
  – This tends to be lost amidst attention on fluctuations in interest rates and housing starts

• Overall industry structure is becoming more attractive

• Large multi-regional builders enjoy significant and growing competitive advantages over smaller builders

• Market assessments of homebuilding stocks appear to be out of line with other industries that have similar structural characteristics
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Investor Barriers to Strategy

• Investors often reward growth at the expense of sustained profitability

• Investors fixate on highly visible but short-term demand influences such as interest rates and overall housing starts rather than structural determinants of long-term profitability

• Investors and analysts create strong pressures for companies to emulate the practices of “successful” peers, or “do deals” (M&A)
  – Reinforce imitation instead of distinctive competitive advantages

• Investors and analysts should pay more attention to the structural attractiveness of a company’s industry and its sustainable competitive advantages versus cyclical fluctuations and short-term trends
The U.S. Homebuilding Industry and
The Competitive Position of Large Builders