



User Manual

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Chapter 1: Installation

Welcome!

Before you install Capitalism II, take a moment to review the Minimum and Recommended System Requirements. Your computer should meet **all** of the Minimum Requirements so that Capitalism II may run. If it meets or exceeds the Recommended Requirements you will find game performance greatly improved.

Minimum System Requirements

Operating system	Windows® 95/98/2000/ME/XP (Windows® NT not supported)
CPU type and speed	Pentium® II 233 MHz or processors of the same grade
Memory	64 MB RAM
CD-ROM Speed	4x CD-ROM/DVD-ROM drive
Hard drive space	250 MB free hard disk space
Graphics card	Video card with DirectX 8 compatible driver
Other needs	DirectX 8 compatible sound card; Keyboard; Mouse

Recommended System Requirements

Pentium® II 350 MHz or processors of the same grade and 128 MB RAM

Requirements for Multiplayer

Multiplayer support (2-7 players) 56.6 Kbps or faster connections for Internet play; TCP/IP or IPX compliant network

To install Capitalism II follow the procedures below:
Before you start you must have Windows 95 (or later) installed.

- 1) Start your computer and wait for Windows to finish loading.
- 2) Insert the Capitalism II CD-ROM in your CD-ROM drive. If you have AutoPlay you will see the installation screen. Follow the on-screen instructions and Capitalism II will be installed on your computer.

If the installation screen does not appear, it is likely that AutoPlay is disabled. Follow these procedures:

- 1) Click START on the taskbar.
- 2) Select SETTINGS, then CONTROL PANEL.
- 3) Double click ADD/REMOVE PROGRAMS.
- 4) Select INSTALL, NEXT and BROWSE.
- 5) Locate the program called SETUP on the CD-Rom and click OK.

The installation screen should now appear. Follow the on-screen instructions and Capitalism II will be installed on your computer.

Using the Mouse

Capitalism II is controlled using a combination of keyboard and mouse controls. The following table is a guide to the mouse controls.

Command or Phrase	Means
Left click, Select	Depress the left mouse button
Right click	Depress the right mouse button
Double click	Rapidly depress the left mouse button twice

Please note that if your mouse is equipped with a scroll wheel you may use it to zoom in or out of the main city view.

Chapter 2: Getting Started

You begin Capitalism 2 at the main menu screen. From here you have 5 options:



- Single Player Game** Play against the computer
- Multiplayer Game** Play against computer and human opponents via a network or the Internet
- Hall of Fame** View the list of the best players
- Credits** View the game credits
- Exit** Exit to Windows

Single Player Game

Select the Single Player option from the main menu to play Single Player games. You may now choose from loading a previously saved game (*LOAD*), playing a *CAMPAIGN*, or defining a *CUSTOM GAME*.

Click *LOAD* and select a previously saved game. The game will start automatically.

Click *CAMPAIGN* and the following screen appears.



Select either,

Entrepreneur's Campaign to play the tutorials. The tutorials will lead you through game play basics. They are designed to be played in sequence, allowing you to maximise your learning potential.

If it is your first time playing the game, you are **HIGHLY RECOMMENDED** to start with *Entrepreneur's Campaign*.

Or select

Capitalist's Campaign to play through specific challenges presented as individual scenarios. The scenarios are designed to be played after you have completed the *Entrepreneur's Campaign*, or when you are comfortable with your knowledge of Capitalism II.

Unlike *Entrepreneur's Campaign*, where you will only have access to the next scenario in the campaign when you have successfully completed the current one, *Capitalist's Campaign* provides you with a choice of 5 scenarios at a time. When you have completed any of the available 5 scenarios, a new one will become available, until all scenarios in the campaign have been revealed.

Alternatively, if you wish to have open play, click *CUSTOM*. Here you will be able to define some of the game parameters yourself. A series of screens will lead you through the available options. You may alter as many of the options as you like, from all to none. The first screen that you will see is shown to the right.



From the screen shot you can see that the *BASIC* tab is the default selection. From here you can alter your corporation's color (as displayed in game), its logo, and the in-game portrait that will represent yourself. Click the yellow left/right arrows to cycle through the available choices.

Next choose your corporation's name and enter your own name. You will begin the game as chairman and chief executive officer of your corporation.

You may choose a difficulty level by clicking the buttons labelled 1 to 8. 1 is the easiest and 8 is the most difficult. Modifying any of the game settings in the following tabs will define the difficulty as Custom.

Lastly, you can click the *Randomize* button to set the game settings in the tabs to random values.

Click the ENVIRONMENT tab

In the **Environment** screen you can:

- Define the **Number of Cities** that will appear in the game.
- Determine the level of **Start-up Capital** (or money) you and your corporation will have.
- Set the frequency of **Random Events** such as plagues and power black-outs.
- Set the **Game Starting Year**. An earlier start date will mean that some technologies will have to be researched before they are available to you.
- Decide if you wish to **Allow Stock Investment**. If you decide on including the stock market your corporation will be able to invest in other corporations, but it will also be open to possible takeover and merger moves from other corporations.
- You may choose whether to allow only single **Retail Store Types** or many. Selecting one type will result in generic departments stores that can sell any product, while selecting many types will result in more specific stores being available, such as toy and jewellery stores. Further information can be found in Chapter 4.
- Finally, you may decide if you want a **Complex City Economy** or not. If you decide to enable this option each city will be subject to variances in the local city economy. You may find that some cities have lower land values and labor costs, enabling you to operate more cheaply before exporting your goods to a more wealthy market. Or you may find that product demand is different than found in a neighbouring city. An

abundance of work will increase the local population causing land values to increase and traffic to become denser. All in all, the city economy will reflect the dynamics of the city as it develops.

Click the COMPETITORS tab

In the **Competitors** screen you can:

- Define the **Number of Competitors**.
- Set the level of their **Start-up Capital**.
- Set their economic **Aggressiveness** towards other corporations.
- Adjust the **Expertise** level for each corporation.
- Choose to be able to see your competitors' **Trade Secrets**. If you select 'yes' you will be able to view firm layouts, product information and R&D projects.
- Alter the **Competence of Local Competitors**. These local stores are not corporate controlled but still influence the city market place.

Click the IMPORTS tab

In the **Imports** screen you may:

- Determine the number of **Seaports Importing Consumer and Industrial Goods per City**. The more seaports of each type in existence, the more diverse the range of products will be available at the start of the game.
- Select **Constant Import Supply**. If this is selected, the supply of imports will be constant as long as demand exists. Otherwise the supply may be cut off suddenly.
- Determine the **Import Quality**. A low import quality product should be inferior to a corporation manufactured product at the beginning of the game. Conversely, imported goods of high quality should be superior at the start of the game.

Click the GOALS tab

In the **Goals** screen you may set custom goals for the new game. Click the - and + buttons to alter the settings. If you decide to play to any goals, you may set:

- The **No. of Years** over which the goals must be achieved.
- The **Goal Score Bonus**, which will be added to the player's score if the goals are achieved.
- **Values 1** to set financial goals.

- **Values 2** to set corporate performance goals.
- **Industries and Products** to set, respectively, industrial and product dominance goals.

When you have finished customising the game click *START* and the game will begin.

Multi-Player Game

Select the Multi-Player option from the main menu to play Multi Player games. You may now choose from *Play it on Ubi.com*, *LOAD* a previously saved game, or *CREATE A NEW GAME*.



Step 1: Starting a Multi-player Game WITHOUT Ubi.com

You should only select *CREATE A NEW GAME* or *LOAD* now if you want to start a multiplayer game playing in a local area network, via modem or cable directly, or via the Internet accessing a known TCP/IP address. If this is not the case with you, you should proceed to the manual section "*Step 1: Starting a Multi-player Game WITH ubi.com*" below.

If you have selected *LOAD*, you will be asked to select a game you previously saved in a multi-player game session.

Subsequently, you will shown to the following options:

- IPX Connection for DirectPlay** Join a local area network game
- Internet TCP/IP Connection for DirectPlay** Join a local area network or internet game
- Modem Connection for DirectPlay** Join with another player by modem

Serial Connection for Direct Play Join with another player linked by serial cable

Left click on any of the four options and press the *CONTINUE* button. Now proceed to the manual section, "*Step 2: Setting Up the Multi-player Game*" below.

Here you will be asked to provide *YOUR NAME* and a *SAVE GAME FILE NAME*. Once you have completed these, choose *CREATE* to begin a new multi player game, or *JOIN* to take part in an existing session.

You will then be taken to the Multiplayer Game Setup screen where you can customize the new multiplayer game and chat with other players. To chat, just type in your chat message and press *ENTER* to send.

When you are ready, click the *READY* button and the indicator next to your name at the top of the screen will turn from red to green. When all players' indicators are green, the creator of this game (the player who selected *CREATE* instead of *JOIN* in the previous screen) can now click the *START* button to start the game.

Chatting with Other Players

To chat with other players in a multiplayer game, either click the Chat button on the toolbar at the bottom of the screen or press the Enter key. The chat message box will be displayed at the bottom of the screen and prompt you to enter a chat message.

The message will be sent to all other players by default. There is, however, a list of buttons in different colors representing different companies controlled by other players. If you click any of them, the message will be sent to the particular player only.

Winning or Losing

The following are definitions of winning and losing in different types of games in Capitalism II.

Single Player Game - Campaign Game

You will win if you achieve all of the assigned goals in the given time.

You will lose if any of the following occurs:

- You are not able to achieve all of the goals within the given time.
- You retire without achieving all of the goals.
- Your corporation goes bankrupt.
- Your corporation is taken over by another corporation.

Single Player Game - Custom Game

If you have not set any goals for the game, the game will be open-ended. You will lose if your corporation goes bankrupt or if it is taken over by another corporation.

If the game has a set of specific goals, the winning and losing conditions will be the same as those in a campaign game.

Multi-Player Game

If you have not set any goals for the game, the game will be open-ended. You will lose if your corporation goes bankrupt or if it is taken over by another corporation.

If the game has a set of specific goals, you will win if any of the following occurs:

- You achieve all of the assigned goals in the given time.

You will lose if any of the following occurs:

- You are not able to achieve all of the goals within the given time.
- You retire without achieving all of the goals.
- Your corporation goes bankrupt.
- Your corporation has been merged into another corporation which formerly owned not less than 75% of your corporation's shares.
- Another human player achieves all of the goals before you do.

Note: Unlike in a single player game, where you will immediately lose the game when somebody has acquired 50% or more of your corporation's stock, in a multiplayer game you will be allowed to continue your role as CEO of your corporation even though somebody else has acquired controlling interest.

You will only lose the game when another corporation has acquired 75% or more of your corporation's stock and decides to execute a merger with your corporation. The result of this is that the entirety of your company will be consolidated into the other company, thus ousting you as CEO.

New Features of Capitalism II

For those who have played Capitalism or Capitalism Plus, the following is a highlight list of new features of Capitalism II.

- Dozens of exciting new scenarios are packed into two brand new campaigns: The Entrepreneur's Campaign and The Capitalist's Campaign.
- Vivid, isometric 3D graphics show off the stunning new buildings, roads, vehicles and people.
- New multiplayer games, with up to 7 players, offer intense competition against players from around the world.
- A new ability to acquire buildings from other companies. In multiplayer games you will be able to negotiate for the best prices with your human or computer opponents.
- The cities in Capitalism II are modeled with a dynamic economic system. Flourishing businesses and busy traffic will increase the area's land values. Astute investments in the real estate market can be a path to riches.
- Take on the title of Real Estate Mogul by building apartments and commercial buildings in pricey downtown locations.

- Build a headquarters for your company and, from there, execute corporate-wide training programs. Allocate resources to public and investor relations, promoting your brand and your company's stock.
- Build your dream mansion with the fortune that you have made in the business world.
- Quickly judge the status of your business by observing the activities of your employees and customers in the newly added interior views
- Economic systems are not only dynamic, but complex as well. Labor cost and cost of living will vary from city to city, giving you an incentive to set up production in areas of low overhead, while exporting to cities with a more wealthy consumer base.
- Now more product types than ever. Over 60 products for you to manufacture and market.
- A new streamlined interface that eases the locating of suppliers and the setting up of retail stores.
- You can now build an array of retail stores - from mega-discount stores to specialty stores; each with its distinct advantage for your business strategy.
- Rather than being forced to develop your own technology, you may now acquire it from another company. And you may sell to others the technology that you have developed yourself.
- You will now be able to fill new senior management positions. Chief Operating Officers, Chief Marketing Officers and Chief Technical Officers can help to streamline some of your day-to-day business activities.
- Expand your corporation into a true conglomerate; get ink on your fingers and take to the airwaves with your new newspapers publishers and TV and radio stations.

Chapter 3: Game View

After beginning a new game, or after loading a saved game, you are presented with an isometric view of your starting city. The view can be zoomed using your keyboard + and - keys, or with a scroll-wheel equipped mouse. Move the pointing hand icon using the mouse or keyboard cursor keys to navigate around the map.

The Toolbar

This is located at the bottom of the screen and comprises 8 sections.



Game Tools – A side bar menu opens when you click on the tool bar. From top to bottom the menu displays:



Construction. Various types of building are available, from Retail Stores to Corporate Headquarters. See Chapter 4 for more details.

Zoom Levels. Three levels of zoom are available. Click on a magnifying glass to alter the zoom level from closest view (top glass) to farthest view (bottom glass).

These three icons link to **Product Summary Report**, **Corporate Summary Report** and **Finance Summary Report** respectively. These topics are discussed in Chapter 5

Headquarters. Access information regarding your corporation. More information can be found in Chapter 4

Stock Market. The Stock Market is covered in Chapter 6.


Game Options. Load or Save games.

In Game Options. See details below.

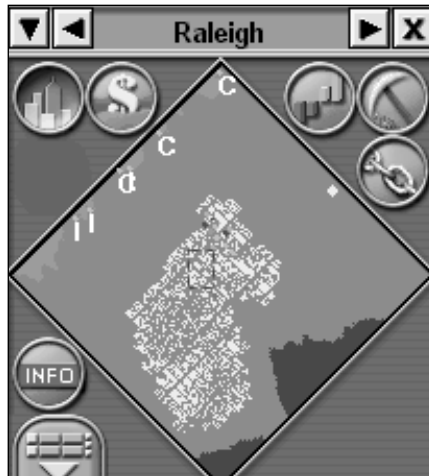
Game Speed. Click anywhere on the dial to alter the speed. The game is paused when the needle is pointing to the bottom left, and running at full speed when it points to the bottom right.

Click the **Game Tools** icon on the toolbar to close the menu.

In Game Options. This screen allows you to activate or deactivate game sound effects, music or the autosave feature. You may also alter the autolink (your purchasing units locate their own supplies) and internal sale features (your manufactured or farm-reared products are available for you corporation only). Select News to enter the comprehensive news section. From here you may toggle several options to control how much or how little news you are given. News items will be displayed at the bottom of the city view screen for short time. If the headline relates to the construction of a new building or the discovery of new raw materials, clicking the square to the left of the headline will reposition the city view over the source of the news.


 **2. Mini Map** – Click the map icon on the toolbar and a small map appears. This provides important geographical and financial information to help you plan your strategy.


A window opens top right of the main game screen displaying the current city. Government buildings (See Chapter 4 for more information) are shown in blue, whilst corporation-owned buildings are shown in the corporate color. Seaports are labeled C or I depending on the type of import handled: Consumer or Industrial goods. A flashing rectangle indicates the map location of the current isometric view on the main screen. Clicking anywhere on the Mini Map will update the main display to that location.





If you have chosen a game with several cities, they can be viewed by clicking the left/right arrows adjacent to the city name at the top of the Mini Map window. Alternatively, click the down arrow to display a list by city name and click on a city to choose it.


Within the Mini Map view are several icons. These toggle various filters that are then displayed over the city view.


 **Buildings.** Default view displaying the city buildings.


 **Land Values.** Light-colored regions represent higher land values than darker regions.


 **Profit Loss.** Shows which firms are profitable and which are not.


 **Raw Materials,** Shows the location of such items as Timber, Iron and Gold, which can be mined for use in manufacturing other goods.


 **Links.** This filter displays product, firms and corporation links within the game. Use it in conjunction with the “Product/Firm” filter to track, for example, the sale of raw materials from your mine.

 The **INFO** icon allows you to select whether or not the main view indicates what a building is used for (toy store, apartment building). If the option is turned off, the main screen will still display the buildings, including corporate insignia.


 The “Product/Firm” filter allows for greater inspection by toggling the various buttons it contains. For example, by clicking the MYFIRM button you can cycle through the location of all your buildings within the current city, or multiple cities if you toggle between THIS CITY/ALL CITIES. Similarly the PRODUCTS button allows you to search for specific products, for example, to see if and where a particular product is being manufactured and sold. Use FIRM to search for specific buildings (such as Retail Stores or Factories), or try CORP. for a corporate level search. Choose from a combination of buttons to refine your search. For example, choose “Retail Store” from FIRM and “Canned Soup” from PRODUCTS to see which stores are selling soup in the city. To close the Mini Map window, click the X in the top right or click the Mini Map icon on the toolbar.

 **3. World Map** – Displays the world location of the current city (and any other playable cities). Click the World Map icon on the toolbar. To close the map view, click the toolbar again, or click the X in the top right of the map window.

 **4. Information** – A comprehensive choice of reports and guides. Further details can be found in Chapters 5, 6 and 7.

 **5. Back** – Return to the previous screen viewed (like a browser back button).

6. Cash & Profit – A live reading of your corporations' current cash and profit amounts.

 **7. Profit/Loss** – A live bar chart depicting corporate profit and loss information for the previous 6 months. The length and color of each bar relates to the nature and amount of the monthly turnover. A tall, green bar indicates large profit, whilst a short red bar indicates a small loss.

8. Date – Shows the current game month, day and year data.

Understanding a Firm

To build a firm, select the type of firm you want to build from the **Construction** menu (see above). Next, position the cursor over the location on the map where you want to build the firm. If the firm can be built in the selected location, you are informed about the total building cost, which includes the land and construction costs. If you think the cost is reasonable, click the Build button to start construction.

Some firms offer you choices of different sizes. The size of a firm affects 1) its setup and monthly operating cost, 2) its capacity – the quantity of products that it can stock, 3) its productivity – the rate it produces products, and 4) the number of employees each firm unit employs. You should build a larger firm if you anticipate a high demand for your products. On the other hand, if you are skeptical about the demand of your products, you should go for a smaller firm.

The land value of an area may change over time. It rises when there is an increase in traffic volume and the number of buildings in the area. Conversely, it falls when firms in the area are closing down and the volume of traffic decreases. Players will benefit from their real estate investments if the land values of their properties increase and this will be reflected in their corporate balance sheets.

The building will be immediately available for use. Click the building to 'enter' it. With the exception of apartment, commercial, government and media buildings, which have building specific interiors, you will see a similar screen to the one shown.



The screen represents a department store selling the retail store maximum of 4 products. The top section of the screen shows the owning corporation – double click on the logo to enter the Corporate Summary screen – and two graphs depict the firm's profit and revenue over the last 12 months. At the top right is a filter that will allow you to cycle through specific firms, products and corporations.

The next row shows photos of the products on sale. As this is an established store, all 4 slots are occupied.

The lower left section contains information relating to the currently selected unit in the Layout section to the right. In the example shown a Purchasing unit is selected.

At the left are three tabs labeled "1", "2" and "3". "1" is the information view which is what you are currently viewing. Clicking the "2" tab will change the view to the exterior of the firm and clicking the "3" tab will display the interior view of the firm. The interior view gives you visual cues about the productivity of your firms and the number of customers in your stores. For instance, if the employees of one of your factories are idle, it is a clear indication of the existence of a problem in your production line and you must take action to fix it immediately.



Layout Section

To the immediate left of the nine unit boxes is a column containing five icons. These are layout library, auto link, help, firm financial report and training, and are covered in detail below.

Setting up a Functional Unit

There are more than a dozen different functional units in the game. Each one has a distinct function. For example, a purchasing unit is responsible for purchasing goods, whereas a sales unit sells goods and generates income for the firm.

To set up a functional unit, double-click a location inside the firm where you want to begin construction. A menu prompts you to select the type of unit you want to set up. Because the different types of units have different functions, some units require more capital and workers than other units. For example, the manufacturing unit requires many more people than the inventory unit. After you set up a unit, a box displays summary information about it in the lower left of the screen. In this area, you see a picture of the unit and a group of people representing its workers. The workers in red uniforms are novice workers and the workers in blue uniforms are experienced. For details on improving worker experience level, see Worker Experience and Unit Level below.

Linking Functional Units

You can link two units together by double-clicking the link line between them. Once linked, they can communicate with each other and transfer goods.

Since functional units are the essential components of a firm, if the linkages between the units are not properly established, the firm may not function as you intended.

For example, linking a purchasing unit to a sales unit enables the goods purchased by the purchasing unit to move onward to the sales unit for sale. Without the linkage, both of the units will become idle and neither will contribute to the profitability of the firm. See Chapter 4, for more detailed information about each type of unit.

Labor Cost

For simplicity, the monthly salary of each worker in the game is set at \$2,000. This salary applies to all workers regardless of the nature of their jobs or their experience. The specific salary expenses of a firm are shown in the Financial Report. Please note that hiring individual officers, such as a Chief Technical Officer, will cost more than \$2000 a month. These hired professionals command salaries in excess of six figures. See Chapter 4, HQ Unit Types, for information about hiring professionals.

Staff Training and Procurement of New Equipment



To the left of the layout section, there is a vertical slider labeled Training. Use it to set the spending for staff training and procuring new equipment. You can see the exact amount spent on training and equipment for the entire firm in the Financial Report.

Spending on staff training and installing new equipment greatly affects the efficiency of the workers as the functional unit improves. It is worthwhile for a firm to spend more on this area especially as one considers that there are long-term benefits to be gained.

Worker Experience and Unit Level

If an inexperienced worker is provided with proper training, the worker eventually becomes an experienced worker. You can distinguish between a novice worker and an experienced worker by looking at the uniform color. Novice workers wear red uniforms, whereas experienced workers wear blue. When all the workers in a unit become experienced, the unit will increase one level.

The overall productivity and capacity of most units increase when their unit level is increased. All units begin at unit level 1, and certain units continue to improve until they reach the highest rating, unit level 9.

The rate of improvement varies for the different unit types. Improvement largely depends on the resources you allocate to train staff and upgrade new equipment. Employees who are in units with high utilization receive more experience than employees who do not work to capacity. Workers who work to their capacity will learn faster than workers who are idle. Therefore, it is not unusual to find that the rate of improvement is faster during the growth phase of the business than when the firm has leveled off in its productivity.

The unit level decreases for most units when there is change in the product handled by that unit. For example, if a manufacturing unit, which previously manufactured sport shoes, changed its production line to manufacture jeans, its unit level would immediately decrease.



Auto Link

Below the Training and Equipment slider, you can see the Auto Link button. If you enable it, all of the purchasing units in the firm with broken supplies will look for the needed supplies automatically. This feature also works with layouts pasted from the layout plan library.



Help

Click the help icon to be taken to the Manager's Guide screen. This guide is discussed on page 100.




Layout Library

Clicking the books icon next to the layout grid accesses the library. When you enter the library you can immediately ADD the layout you have just left. Complete the description line if you wish. You may also Delete the firm's layout with the one currently displayed in the library window. If you enter the library from either a farm or factory you will be able to use the Search filter to locate any previously stored layout plans containing the product you select. Alternatively you may use the slider below the layout plan to search through all the stored plans. If you locate a plan you wish to use, click USE and the plan is placed within your firm.

When in the farm or factory layout mode there are two further sections to assist you. These are the input and output sections. The output section lists the product outputs of the currently displayed layout plan, whilst the input section lists the products required to attain the output. A tick next to an input list item indicates that particular product is available from a local supplier.

Firm Financial Report

 Click this icon to display the financial report for the firm. This report, discussed in Chapter 5, details the income and expenditure of the firm (such as salaries paid, training expenses and sales revenue) by current month, previous month, year to date or lifetime of the firm.

Product Summary

The main screen displays the pictures of all products currently available for sale in the firm. Each product picture has several bar and line indicators on the side. These indicators tell you how good the product is compared to the market's standard and how well the product is currently selling. An explanation of the indicator bars and lines follows.

Supply and Demand Lines

There are two vertical lines to the left of the product picture. The blue one is the supply line, and the red one is the demand line.

If the supply line is longer than the demand line, the supply of the product exceeds the demand. This implies that the profitability of the product might not yet be fully exploited. There is more capacity to meet demand and generate revenue than there is currently demand for the product.

On the other hand, if the demand line is longer than the supply line, the firm cannot supply enough goods to meet the demand. In this situation, you should increase the supply of product as soon as possible to increase revenues.

Product Rating Bars

There is a set of two vertical bars to the right of the picture. The left one, which usually consists of differently colored portions, is the overall rating bar. Each portion represents a distinct aspect of the product and their combined rating becomes the overall rating of the product. The definitions of the colors are:

- **Yellow.** The product's price attractiveness.
- **Green.** The product's quality.
- **Orange.** The product's brand.



The relative size of each bar represents the importance of that aspect to the consumer. For example, consumers of the soap shown on the left are buying this particular soap because it has a high rating for brand – the size of the orange brand bar is equivalent to the combined sizes of the yellow

price and green quality bars. If the price of the soap were lowered, the likelihood is that the yellow price bar would increase in size to represent the new price attractiveness felt by the consumer. As a consequence brand and quality would become slightly less important considerations for the consumer. The important thing to remember is that the relationship of the bar sizes is an indicator of why the consumers are purchasing that particular product, irrespective of competition or necessity. You may see a situation in which two examples of a product successfully exist in the market place even though one is inferior in brand or quality to its rival. It may be the case that the inferior product is priced so aggressively low that its only selling point is its price – it will only show a yellow bar – whilst its rival displays large bars for quality and brand. An example of this is given in **Product Information**, below.

Studying the relative sizes of the bars can help you decide a strategy; Concentrating on improving a soap's brand, for example, would initially be more beneficial than modifying price or improving quality.

Product Market Share

Next to the product rating bar, there is a red bar showing the market share of the current product in the city. When the length of the bar is close to its maximum, the product is dominating the market in the city.

Product Brand Indicator

Directly under the two bars, there is an indicator showing the corporate color of the product's brand owner. A gray branding indicates imported products.

Product Information

When you left-click a product photo, detailed information is displayed in the lower-left section of the screen. The example below shows detailed product information. In this instance the product on sale is a bed.

The Product Information section displays:

Selling Price. The selling price of the product.

Total Cost. In a factory, this is the total cost of the raw materials used to manufacture one unit of the product, including the freight cost of the raw materials.

In a retail store, this is the purchase cost (how much the store pays the supplier) and the freight cost of the product.

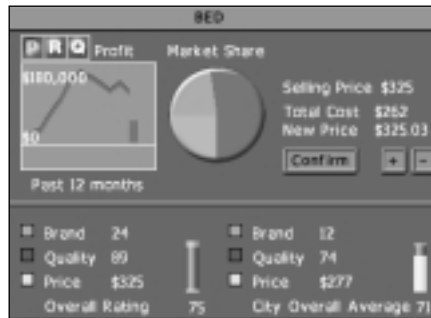
In a mine, logging camp, or oil well, this is the cost of the consumption of the natural resource reserve. When a corporation buys land with a natural resource reserve, the reserve is treated as a corporate asset. Hence, when the reserve is being consumed, the devaluation of the asset is regarded as a cost to the company.

New Price. If the firm displayed belongs to your corporation, you can change the selling price of the product by setting the new selling price and then clicking the Confirm button to confirm the change of the selling price.

NOTE: There is an upper limit on the price you can set.

The graph shows information about the product. There are three buttons above the graph. Click one of these buttons to control the type of information displayed on the graph.

- **P button.** Shows the gross profit of the product over the past 12 months.
- **R button.** Shows the revenue of the product over the past 12 months.
- **Q button.** Shows the quantity of the product sold over the past 12 months.



Product Ratings

The section at the lower part of the Product Detail area displays important ratings about the product. They are:

- **Brand.** The product's brand rating.
- **Quality.** The product's quality rating.
- **Price.** The product's sale price.
- **Overall.** The product's overall rating.

To the right of each rating, the average rating of similar products in the city is displayed.

The example below is taken from the Product Detail information for the bed discussed below.



The type of bed being sold has a Brand rating of 24, a Quality of 89 and a Price of \$325. These ratings result in an overall rating of 75. In comparison, other competitors'

beds for sale in the city do not have such established branding or quality but their price is lower. As a consequence the overall rating for the competitors' beds is only slightly lower at 71.

By looking at the Product Rating bars you can see the real difference between the two types of bed. The consumers purchasing the current firm's beds are more concerned by the higher quality on offer – the green portion dominates the Product Rating bar. Those consumers purchasing the competitors beds are doing so because of the lower price – the yellow portion dominates the Product Rating bar. These are local variations to the concerns normally addressed by the consumer. A bed is usually rated in equal proportions against Price, Quality and Brand (the yellow, green and orange sections of the Product Rating bar in the product photograph are of approximately equal size). Such variations arise if a product displays superior attributes, in this example a much higher quality, than other types on offer.

Links to Other Reports

You can display the Product Detail Report for a specific product by double-clicking the product picture.

Complex City Economy

Capitalism II offers the player with an optional economic simulation mode called “*Complex City Economy*” which provides the player the challenges of operating a business in a highly dynamic economy. *Complex City Economy* can be enabled or disabled in the *Custom Game Setup* screen's *Environment* tab.

With *Complex City Economy* enabled, the first thing you notice is the displays of the following economic indicators in the mini-map window.



Spending Level indicates the ability and willingness of consumers to spend. A more developed city will have a higher **Spending Level** than a less developed one. It is also affected by the city's economic climate, which is described below.

The demands of all products are affected by a city's **Spending Level** at different degrees. Products with a high **necessity index** (e.g. toothpaste) are less affected by **Spending Level** than those with a low **necessity index** (e.g. cars.) A product's **necessity index** can be seen in the **Product Detail Report**.

Salary Level indicates the labor cost of the city. One good way to increase profitability is to set up production in areas of low labor cost, while exporting to cities with a more wealthy consumer base. **Salary Level** is also affected by the city's economic climate.

Economic Climate can be **Boom**, **Prosperous**, **Normal**, **Recession** or **Panic**. A city with a booming economy benefits all business activities with higher consumer demands (indicated by **Spending Level**). On the other hand, labor cost also tends to increase in the midst of a booming economy, thus increasing the cost of operating a business (indicated by **Salary Level**).

You should pay close attention to these economic indicators, which all vary from city to city and over time, when selecting a city in which to build a new firm. In a city in recession, businesses suffer. Building a large department store in a city with a panic economy is a recipe for financial losses and failure. To avoid this, you must keep a watchful eye on these economic indicators.

Business startups will help stimulate a city's economy and improve its economic climate. Conversely, closures of businesses will negatively affect a city's economy and excessive business closures may drag a city into a recession. As such, if you invest aggressively in a city by building new firms, the positive effect it brings to the economy may in turn benefit all of your businesses in the city.

Chapter 4: Firms, Units & Buildings

A firm is any building that a corporation can operate, such as a retail store or a factory. Buildings are controlled by civilians (houses, stadiums and the like) or by the city government (such as the stock market).

Usually a firm is built and operated by the same corporation, but there are exceptions. Radio and TV stations, and Newspaper Publishers begin the game under the city's control. Corporations may buy these firms and subsequently sell them. Construction of a firm not only includes the cost of the actual structure, but a land value cost. The land value is determined by several factors, but the general rule is that construction on empty land will be cheaper than having to purchase occupied land.

Within each firm, specialized units may be built. Several units are common amongst different types of firms whilst some are firm specific. All units are placed within the Layout section of a firm. This is a 3 x 3 grid containing 9 slots. Each slot can accommodate one unit. Units may be linked to other units to provide functional groups. For example, if you connect a Manufacturing unit to a Sales unit you will be able to sell what you produce.

You may find you need to use the same layout in more than one firm. See Chapter 5, Reports and Guides, for information on using the Layout Library. The common units are discussed below whilst the more specialized units are discussed within the relevant firm text.

A firm may be available in different sizes, such as small, medium and large factories. The general rule is that for each increase in size there is a corresponding increase in the production capacity of the firm. However, the firm will cost more to build and maintain than a smaller version. The size of retail stores, mines, oil wells and logging camps are predetermined, but farms, factories, apartment and commercial buildings offer different sizes from which to choose.

Common units

Advertising Unit

Set up in	Retail store, factory, farm, mine, oil well and logging camp
Setup cost	\$5,000
Workers needed	1

An advertising unit in a firm is responsible for contacting the media (television and radio stations and newspaper publishers) and arranging advertising. The following sections describe the unit's basic operation. For an in-depth discussion of advertising, see Advertising on page 89.

Advertising a Product

To advertise a product, do the following:

1. Link the advertising unit to a unit with a product. If you link to a sales unit, the advertising unit will advertise the product sold by the sales unit.
2. Press the Link Media Firm button to select a media firm (a television station, a radio station or a newspaper publisher) in which to advertise the product. Choose a media firm and press the Link button.
3. Set the monthly advertising expense per product by clicking on the Monthly Expense slider. A higher advertising budget means your advertisement is broadcast more frequently, which increases public awareness about your product more rapidly.

Unit Details

When an active advertising unit is highlighted, the unit detail area shows the following information.

- **Monthly Spending Per Product.** The amount spent advertising a product each month.
- **Advertising cost (CPM).** The cost to expose 1,000 members of a target audience to an advertising message.
- **Rating Points.** This measurement indicates the portion of potential audiences that receive messages from a specific media outlet. One rating point is equivalent to one percent of the potential audience that receives messages from a specific media outlet. It is calculated by dividing the reach by the coverage.

The information shown in the advertising unit detail box is shown below:



In this example, the unit is linked to the local radio station. It can be seen that the advertising cost per thousand (CPM) for this particular station is \$2.28 and the station enjoys Rating Points of 36.23%. The greater this figure, the greater the population reach the advertising campaign has. The gray slide bar can be manipulated to change the monthly spending per product and will affect the advertising campaign, helping to raise brand awareness of your products. Setting the bar (click and hold the left mouse button and drag the red slider to set the value) all the way to the right will saturate the city with advertising. This may have a negative effect on brand loyalty if you cannot satisfy the increase in demand.

Unit Info



The info-box of the Advertising Unit in the layout area shows the following information:

Ratings Point – Explained above.

Monthly Advertising Expense – Explained above.

Unit Level

Since the function of an advertising unit is to contact media outlets and arrange advertising, the unit's experience does not affect the outcome of the advertising. Therefore, unlike most other units, the unit level of an advertising unit does not increase over time. However, your corporation may hire a Chief Marketing Officer whose expertise will improve the efficiency of your corporation's advertising units without increasing their level. See **Headquarters** later in this chapter for further guidance.

Inventory Unit

Set up in	Retail store, farm, factory, mine, oil well and logging camp
Setup cost	\$50,000
Workers needed	1

Inventory units provide storage for large quantities of raw materials or finished goods.

Although most firms can operate without an inventory unit, it supports smooth operations for the whole firm. The inventory unit's capacity is several times greater than other units and operating costs are several times smaller. The discussion that follows describes the Inventory Unit in detail.

Why Retain Inventories?

There are two major operational reasons why companies retain inventories: anticipation and buffer.

Anticipation inventories

Anticipation inventories are held because you expect a future increase in demand. Rather than operate at peak capacity during one period and then shut down in a subsequent period, anticipation inventories can accumulate before a period of peak demand.

Buffer inventories

Buffer inventories protect against unexpected surges in demand. Any inventory held over and above the average demand requirement is considered buffer inventory. High buffer inventories allow companies to continue to serve customers through unexpected increases in demand.

Unit Details

When an inventory unit is highlighted, the unit detail area shows the following information:

Cost+Freight. The product cost and the freight cost.

Quality. The product's quality rating.

Brand. The product's brand rating.

Unit Level. The experience level of the unit



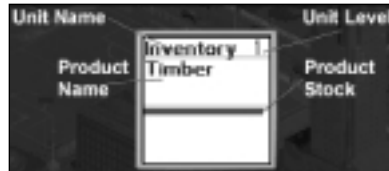
Stock. The quantity of the product stocked in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Utilization. The unit's level of productivity.

Staff. Staff number represented by the figure icon.

NOTE: The color bar under the product picture shows the corporate color of the brand owner of the unit's products.

Unit Info



The info-box of the Inventory Unit in the layout area shows the following information

Product Name. The name of the product in the inventory.

Product Stock. Explained above.

Unit Level

Because an inventory unit provides a place for storing goods, the unit's experience does not affect the productivity of the business. Therefore, unlike most other units, the unit level of an inventory unit does not increase over time.

Purchasing Unit

Set up in	Retail store, farm or factory
Setup cost	\$50,000
Workers needed	2 or 4 (in medium to large firms)

A purchasing unit buys products from suppliers. These units are essential for retail stores, farms and factories. The following sections describe the basic operations and displays of the purchasing unit.

Purchasing a Product

Once you tell the purchasing unit which product you want to purchase, it purchases the product until the supply is no longer available.

To give the purchase unit an order, select the purchasing unit. Press the Link Supplier button and the supplier screen appears.

Alternatively, if you do not currently have any Purchasing units in store you may click the **Add Product** button and a new Purchasing unit will be added to your store (along with a linked Sales unit). The **Select A Supplier** screen will automatically open. Remember that the Add Product button will only be visible if there is sufficient layout space for setting up an additional pair of purchasing and sales units.



Now, select the product you want to purchase from a supplier by:

- Scrolling the main list until you see the product you want, or
- Use the filter lists, All Products, All Suppliers and All Cities, to refine your search. You may, for example select your corporation from the All Suppliers list in order to select a product that you are producing.

Please note that clicking Go To Supplier will take you to that particular factory or seaport. Click the back button on the toolbar to return to your retail store.

You can see from the picture above that each product entry carries specific details. The owning corporation's logo (if any) is displayed to the left of the product picture and the corporation name is displayed in the detail box. If the product is imported, the detail box will show 'Seaport' and a logo will be absent. Next, the city housing the supply and the distance to the supplier is given. Remember that importing from another city will carry additional freight costs. The actual freight cost of transporting the product from the supplier's location to the current firm's location is also shown. The product cost, quality, brand and overall rating are displayed, allowing you to make comparisons if several suppliers offer the same product type. Finally, the current levels of supply and demand for the product are shown. Once you have found a product you wish to purchase, left click the detail box and press the Select button to start the purchasing process.

Stopping a Product Purchase

After a purchase linkage is established, the Stop Purchase button appears. Press this button to stop the current purchase.

Changing the Current Supply

To switch to a new supplier, press the Link button and select the product that you want to purchase. This is the fastest way to change the current supply, because the newly selected product is purchased immediately. You will, however, incur a loss, because the stock of the old product in the purchasing unit is discarded.

To avoid this loss, stop the purchase of the current product by pressing the Stop Purchase button and wait until its stock is cleared to the sales unit or manufacturing unit. Then, link the purchasing unit to the new supplier.

Locating the Supplier of a Purchasing Unit

You can click the "Supplier" button to display the details of the supplier. You may then click "Go to Supplier" button on the detail popup box to go to the supplier firm.

Unit Details

When you highlight an active Purchasing Unit, the unit detail area shows the following information:



Cost+Freight. The cost of the product and the freight cost.

Quality. The quality rating of the product.

Brand. The overall brand rating. This is the sum of the brand awareness rating and the brand loyalty rating.

Supply and Demand. The supply bar is blue and indicates the product supply from the supplier.

The demand bar is red and indicates the product demand from the current firm. If the supply bar is shorter than the demand bar, there is a supply shortage. Overall firm performance may be affected by the shortage and you should consider switching to a better supplier.

Unit level. The experience level of the unit

Stock. This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products,

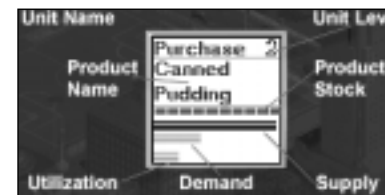
such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Utilization. The orange bar shows the unit's utilization. If this bar reaches its full length, the unit is at full capacity. No more goods can be purchased, even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not being used effectively.

Staff. Staff number represented by the figure icon

The color bar under the product picture indicates the brand owner's corporate color.

Unit Info



The info-box of the Purchasing Unit in the layout area shows the following information:

Product Name. The product the unit is currently purchasing.

Product Stock. This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Supply and Demand. The blue bar indicates the supply of the product by supplier. The red bar indicates the demand for the product from the current firm. If the supply bar is shorter than the demand bar, there is a lack of supply. Firm performance may be affected by supply problems, so keep a close watch on your suppliers.

Utilization. The orange bar shows the unit's utilization. If this bar reaches its full length, the unit is at full capacity. No more goods can be manufactured, even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not being used effectively.

Unit Level

The productivity and capacity of a purchasing unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Sales Unit

Set up in	Retail store, farm, factory, mine, oil well and logging camp
Setup cost	\$100,000
Workers needed	4 or 8 (in medium to large firms)

A sales unit is responsible for selling products to customers. Since sales units are the only units in a firm that generate income directly, you find them in almost every type of firm that produces goods. In the following section, the basic operations and displays of this unit are introduced.

Unit Details

When you highlight an active Sales Unit, the unit detail area shows the following information:

Cost+Freight. The cost of the product plus the freight cost.

Selling Price. The cost of the product to the customer.



Quality. The quality rating of the product.

Brand. The overall brand rating. This is the sum of the brand awareness rating and the brand loyalty rating.

Supply and Demand. The blue bar indicates the supply of the product from the current firm. The red bar indicates the demand for the product from the buyers. If the supply bar is shorter than the demand bar, there is a lack of supply. Firm performance may be affected by supply problems so keep a close watch on your suppliers.

Unit level. The experience level of the unit

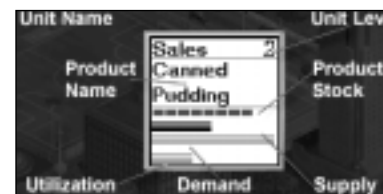
Stock. This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Utilization. The orange bar shows the unit's utilization. If this bar reaches its full length, the unit is at full capacity. No more goods can be manufactured, even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not being used effectively. This could contribute to low profitability of the firm.

Staff. Staff number represented by the figure icon

NOTE: The color bar under the product picture represents the corporate color of the product's brand owner.

Unit Info



The info-box of the Sales Unit in the layout area shows the following information:

Product Name. The product the unit is currently selling.

Product Stock. Explained above.

Supply and Demand. Explained above.

Utilization. Explained above.

Unit Level

The productivity and capacity of a sales unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Bottleneck Diagnosis

Because sales units are the only units in a firm that generate sales revenue directly, inspecting them frequently and removing any bottlenecks usually increases the profitability of the whole firm. Refer to the following table to identify common bottlenecks:

Supply and Demand Utilization	Bottleneck
Supply < demand, utilization = 100	Capacity is peak
Supply > demand, utilization = 100	Capacity is peak
Supply < demand, utilization < 100	Insufficient supply
Supply > demand, utilization < 100	Low demand

Here are some suggested solutions:

Capacity is peak. When the capacity of the sales unit is at its peak, you can resolve this bottleneck in two ways. The first way is to set up an additional sales unit to share the workload. However, due to the limitations of layout space, you cannot do so in every case. The second way is to increase the spending on training and new equipment, which lets the unit improve its unit level and productivity faster.

Insufficient Supply. Sometimes, the cause of the problem is not obvious. It can be caused by a shortage in the product supply, capacity limitation of a purchasing or manufacturing unit, or improper linkage of units, which affects

the scheduling among functional units. To increase the supply, trace the chain of supply, examine all linked units carefully, and remove any bottlenecks you find.

Low Demand. There are many ways to increase demand, but all have costs. For a department store, increasing the frequency of the advertising can be an adequate short-term decision. The real driving forces of demand are price, quality, and brand; however, you should also allocate more of your budget to research and development and plan strategically to decrease the cost of your products. A long-term strategy will win out over a short-term one, if you plan ahead.

Firms

Retail Stores

To choose an appropriate location for a retail store, you must consider the following factors.

- **Strength of competitors in the city.** First, you should know which products you plan to sell. It is wise to build your retail store in a city section with comparatively weak competitors.
- **Population of the city.** The population of the city directly affects the total demand for the goods your retail store offers.
- **Land cost.** The land cost can vary greatly. Land in urban areas is always much more expensive than in rural areas. Similarly, land near the center of the city is more expensive than land farther away from the city center. Despite these costs, it makes sense to build a retail store near the city because this ensures a larger flow of customers.
- **Transportation cost of goods from suppliers.** You have to estimate the cost of transporting goods from the suppliers to your retail store. For goods with a high ratio of weight to value, try to open your retail store in a section of the city not too far away from the suppliers. Otherwise, the cost of transportation could severely affect your firm's profitability.
- **Availability of building site near the city center.** Finally, the availability of a building site near the city center is an important criterion. The flow of customers reaches its maximum in the city center and decreases toward the city border. If your competitors already occupy most spaces in the city center, you will have to set up your retail store in a less advantageous location and you will be at a disadvantage from the very start.

You can set up the following units in a retail store:

- Purchasing Unit
- Inventory Unit
- Private Labeling
- Sales Unit
- Advertising Unit

Purchase units and sale units are typically the most common in retail stores. With one unit of each type, you can form a simple purchasing-sales team.

You can also set up:

- An inventory unit to stock goods and provide the retail store with merchandise when a fluctuation of supply or demand might otherwise leave the store without sufficient stock.
- An advertising unit to arrange advertising of your products on TV and Radio stations or local newspapers.
- A private labeling unit to convert products made under another brand to your own brand. The private labeling unit is detailed below.

The following table depicts the retail stores types available to build if you have chosen 'many' in the game settings. If you chose 'one' store type you will only be able to build Discount Megastores. Each store has a setup cost (for construction) and a monthly operations charge.

Retail Store Type	Setup Cost	Monthly Cost
Discount Megastore	\$1,800,000	\$180,000
Department Store	\$1,000,000	\$100,000
Supermarket	\$1,000,000	\$100,000
Convenience Store	\$500,000	\$50,000
Drug Store	\$500,000	\$50,000
Apparel Store	\$500,000	\$50,000
Automobile Outlet	\$1,000,000	\$100,000
Hardware Store	\$1,000,000	\$100,000
Footwear Store	\$500,000	\$50,000
Jewelry & Watch Store	\$500,000	\$50,000
Leather Store	\$500,000	\$50,000
Computer Store	\$500,000	\$50,000
Cosmetic Store	\$500,000	\$50,000
Furniture Store	\$1,000,000	\$100,000
Sports Store	\$500,000	\$50,000
Toy Store	\$500,000	\$50,000

Some stores are specialty stores and can only sell certain items. For example, a furniture store can only sell beds, chairs and sofas. Because it specializes, speciality stores will enjoy greater demand for its products than, say, an adjacent department store that may also stock the same goods. The main disadvantage of the specialist store is that if demand decreases or supply is interrupted, it is difficult or impossible to stock substitute goods. Whereas the potential range of goods available to a department store cushions the impact of any down turn in trade by allowing the firm to switch to alternate goods.

A full listing of items available to sell in each store can be found at **Appendix A**.

Private Labeling Unit

Set up in	Department store or factory
Setup cost	\$100,000
Workers needed	6

A private labeling unit converts products of other brands to your own brand by labeling the product with your own corporate insignia. If you are tired of manufacturing products yourself, you can label products of a less popular brand with your own brand. This saves you the trouble of managing production lines and lets you concentrate on marketing.

When to Private Label Products

Private labeling is a reasonable choice if your corporation is pursuing a corporate or range brand strategy. In this case, the private-labeled goods can be sheltered under the retailer's brand and receive the immediate benefit of a well-established brand.

Although it seems that private labeling could put additional brand value into a product effortlessly, this tactic should be used with extreme caution. If the quality of the private-labeled product is inferior to those of the existing products in the brand family, it will damage the entire brand. Furthermore, since external suppliers manufacture the products, it is very difficult to assure that their quality will always meet your corporation's quality standard.

Private Labeling Products

Any products directed into the private-labeling unit are relabeled immediately. Usually linking a private labeling unit between a purchasing unit and a sale unit is the easiest way to label the products from another corporation. In this arrangement of units, the purchased goods from another company are labeled with your brand and resold as if you had produced them yourself.

Unit Details

When you highlight an active Private Labeling Unit, the unit detail area shows the following information:



Brand Awareness. The brand awareness rating of the private-labeled goods.

Brand Loyalty. The brand loyalty rating of the private-labeled goods.

Brand Rating. The overall brand rating. This is the sum of the brand awareness rating and the brand loyalty rating.

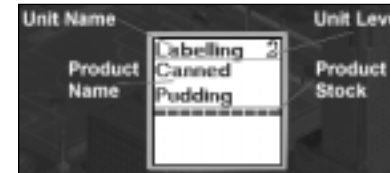
Unit level. The experience level of the unit

Stock. The quantity of the product stocked in the unit.

Utilization. The unit's level of productivity.

Staff. Staff number represented by the figure icon.

Unit Info



The info-box of the Private Labeling Unit in the layout area shows the following information.

Product Name. The product being processed.

Product Stock. This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Unit Level

The productivity and capacity of a private-labeling unit increases when its unit level increases. The table below shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Factory

Factory Size	Setup Cost	Monthly Cost
Small	\$750,000	\$50,000
Medium	\$1,500,000	\$100,000
Large	\$2,500,000	\$180,000

The types of units in a factory include:

- Purchasing Unit
- Sales Unit
- Inventory Unit
- Advertising Unit
- Private Labeling Unit
- Manufacturing

Unit

Set up in	Factory
Setup cost	\$300,000
Workers needed	6, 12 or 24 for small, medium and large factories

Manufacturing Unit

Manufacturing a Product

A manufacturing unit is very flexible. It can manufacture any product, if supplied with the appropriate raw materials. For example, if cotton enters a manufacturing unit, the unit automatically produces textiles. If wheat is the input, flour is produced.

If you want your factory to manufacture a specific product, you must know what its raw materials are. The Manufacturer's Guide contains the raw material information for each product you can produce. You can refer to the Manufacturer's Guide anytime by selecting it from the information screen. (Press the info icon on the tool bar and choose Manufacturers Guide.)

Once you know which raw materials you need, you need to locate a supply of each of the required raw materials. Generally, this is easiest by using the Supply Filter (see Purchasing Units above) or by using the Mini Map filter. Link the purchasing units to a manufacturing unit to start production. After the necessary connections are established, you see the products being manufactured. If you can produce more than one product from the specified raw materials, you see a Set Production button in the unit details area. Select this to determine which item to produce.

Quality of Manufactured Goods

The quality of manufactured goods depends on two factors:

- Raw materials quality
- Factory's production technology

For some products, such as the computer CPU, quality is determined mainly by the production technology. For other products, such as furniture, quality is affected more by the quality of the raw materials. The importance of these two factors varies from product to product. (For details refer to the Manufacturer's Guide.)

The quality rating is calculated from these two factors. The example below shows how to calculate the quality rating. First, the information we need to know concerning the factory and the raw material follows:

- The unit is manufacturing textiles, using cotton as the raw material.
- The quality rating of the cotton is 71.
- The factory's production technology level for textiles is 30.
- The top production technology level in the world is 100.

The quality of the textile is 50% affected by the quality of the raw material and 50% affected by the production technology.

If you highlighted this manufacturing unit in layout mode, you would see the following information:



Textiles	
Product Quality	: 50 / 100
Production Quality	: 15 / 50
Raw Material Quality	: 35 / 50
Production Tech	: 30

Upgrade Tech. Set Production

- Product Quality: 50/100. The quality rating of the current product is 50 and the maximum quality rating a product can have is 100.
- Production Quality: 15/50. The quality of textiles is 50% affected by the production technology and the production technology contributes 15 rating points to textiles' overall quality. These rating points are calculated by multiplying the importance of technology to the product's quality by factory technology divided by the top technology in the world, or, in this case, $50 \times 30/100 = 15$.
- Raw Materials Quality: 35/50. The quality of textiles is 50% affected by the quality of the raw materials and the quality of cotton contributes 35 rating points to textiles' overall quality ($71 \times 50\% = 35$).
- Production Technology: 30. A high production level does not guarantee a high quality rating. You obtain a high quality rating only if your factory's technology level is close to or the same as the world's top technology level.

The top technology level of every product starts at 100. When a product with a higher technology level enters the market, the top technology level is updated accordingly. So launching a new product with an unprecedented technology level into the market can cause existing products to become inferior.

You can improve production technology by conducting research. See Research and Development on page 53 for more details.

Improving Product Quality

Product quality is determined by the quality of raw materials and the production technology. You cannot always control the quality of the raw materials, because you often purchase raw materials from external suppliers. A better way to improve the product quality is to improve the production technology. You can accomplish this with research and development (R&D) projects in your R&D units.

If your corporation successfully completes an R&D project on a specific product, the production technology of that product improves. Then, you can upgrade your manufacturing units so that they benefit from the improved technology. To upgrade a manufacturing unit, highlight it and select the Upgrade Tech button in the unit detail area. A message asks for your confirmation. If you agree to proceed, the new production technology is applied to the unit and the quality of the manufactured products rises.

If the unit's level is higher than level one, a message informs you that upgrading production technology will decrease the unit's level by one level. The unit's level is downgraded because installing new production equipment and applying new production techniques means most workers' experience becomes obsolete. While they go through a new learning process, their productivity drops.

Unit Details

When you highlight an active manufacturing unit, the unit detail area shows the following information:



- **Product Quality.** The quality of the manufactured product. It is the sum of the production quality rating and the raw material quality rating.

- **Production Quality.** The quality rating of the production.

- **Raw Materials Quality.** The quality rating of the raw materials.

- **Production Tech.** The production technology level, which affects the production quality.

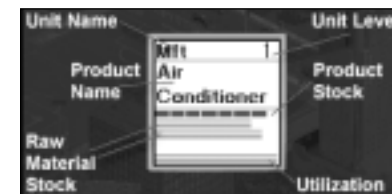
- **Unit Level.** The experience level of the unit.

- **Stock.** This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

- **Utilization.** The orange bar shows the unit's utilization. If this bar reaches its full length, the unit is at full capacity. No more goods can be purchased, even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not being used effectively. This could contribute to low profitability of the firm.

- **Staff.** Staff number is represented by the figure icon.

The colored bar under the product picture shows the brand owner's corporate color. Because the current factory must be the manufacturer and brand owner of the manufactured products, the color displayed is always the corporate color of the factory.



Unit Info

The info-box of the Manufacturing Unit in the layout area shows the following information:

- **Product Name.** The product the unit is currently manufacturing.

- **Product Stock.** Explained above.

- **Raw Material Stock.** Explained above.

- **Utilization.** Explained above.

Unit Level

The productivity and capacity of a manufacturing unit increase when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Bottleneck Diagnosis

Here are some suggestions to eliminate some common bottlenecks:

Inconsistent supply of raw materials

Setting up an inventory unit and linking it between the purchasing unit and manufacturing unit usually improves this situation. In addition, an inventory unit is useful for raw materials that have seasonal supply fluctuations (for example, wool and crops).

Insufficient supply of raw materials

Try to find a supplier that can provide raw materials of comparable quality and price more consistently. If you cannot find a better supplier or you anticipate a surge in demand for your manufactured goods, consider backward integration – setting up a firm yourself to supply the lacking raw materials.

Peak Manufacturing Capacity

The most common way to remove this bottleneck is to increase the budget for training and new equipment. This accelerates the process of upgrading the unit level, which gives the unit more capacity and higher productivity. If the demand keeps increasing and this increase is likely to be sustained, you could set up more manufacturing units or a new factory to meet the increasing demand.

Bottleneck at the output unit

If finished goods from a manufacturing unit cannot be moved out of the manufacturing unit, production is suspended inside the unit. In this case, the bottleneck is at the output unit. Removing it restores the smooth flow of

finished goods out of the manufacturing unit. To move more goods out of your manufacturing unit, you can increase the number of sales units or the demand for your manufactured products through increased distribution or advertising, depending on the nature of the surplus in supply.

To help you better understand the basic function of each type of unit in a factory an example follows.



The example at left shows the layout of a factory manufacturing socks:

The purchase unit buys the raw material, wool. Next, the raw material is moved to the manufacturing unit and stored there. Once the manufacturing unit has the full amount of the required raw material, it starts manufacturing socks. The finished goods move to the sales unit and are ready for sale.

After operating the factory for a few months, you may find that the supply of wool is inconsistent, because of seasonal fluctuation of the wool supply. To solve this problem, set up an inventory unit between the wool purchasing unit and the manufacturing unit (shown below right without the Sales units).

The inventory unit is a buffer; it stores wool when the available supply exceeds the company's ability to process it into socks. When the wool supply diminishes, supplies of wool are taken from the inventory unit so that the factory can continue to operate.

The inventory unit helps the company's profitability by keeping the factory running year-round and not only during the wool-shearing season.



Use inventory units to control seasonal supply

We now have a constant supply of raw materials and need a constant demand for the finished product to make the factory profitable. To stimulate demand for socks, you can advertise the product widely in the city using television and radio broadcasts or newspaper advertisements.

To advertise the socks, you must first set up an advertising unit in the factory. Link the advertising unit to either the manufacturing unit or the sales unit to identify the product that you want to advertise. Click the advertising unit. Select the Link Media Firm button and choose a television station, radio or a newspaper publisher in which to advertise your product. Once the advertising campaign starts, brand awareness and the sales of your product will increase.

A private labeling unit can convert products of other brands to your own brand. If you are tired of manufacturing products yourself, an alternative to production is to label products of a less popular brand with your own brand. This saves you the trouble of managing production lines and lets you concentrate on marketing.

Research & Development (R&D)

Setup Cost	Monthly Cost
\$1,500,000	\$100,000

Your products need good quality to compete successfully. The most effective way to improve your products' quality is to invest in the research and development (R&D) for new technologies, which produces better products. R&D centers are very expensive to set up and maintain. Companies that are struggling financially may not want to set them up right away. You should not, however, put off their construction too long, because the quality improvements from R&D will lead to increased sales and profits. Investment in research and development anticipates that you will need to develop better-quality products to stay ahead of your competition.

Setting up an R&D center is simple compared to other firms, because you just set up an R&D unit. You can use several strategies in R&D.

Starting an R&D project

You can set up a maximum of nine R&D units in an R&D center. They can work independently as nine separate teams or be linked to increase performance. An R&D team consists of one to nine units. After you have linked as many units as you wish into a team, highlight the team leader unit. This will be the unit that is connected to all the other units within the team. Then click the R&D technology button and select the product you wish to research and set the duration of the research project. The R&D team will begin researching the project immediately.

Technology Advancement

The technological advancement you can achieve with an R&D project is determined by the following:

- Duration of the project
- R&D team size
- Unit levels (experience) of the team
- Top product technology level

Duration of an R&D project

The duration of the R&D plan determines the amount of technological advancement that will be accomplished when the R&D plan is complete. Technology is represented by the technology level. The following table shows the relationship between expected technology gain and R&D duration.

NOTE: The table excludes other determining factors. These other factors are discussed in the following sections.

R&D Duration	Technology Gain
6 months	1
1 year	3
2 years	7
3 years	11
5 years	20
10 years	50

R&D team size

An R&D team can have one to nine R&D units. A larger team can achieve more technological advancement than a smaller team. However, an R&D team with two R&D units is not 100% more productive than a single-unit R&D – it is only 70% more productive. This is because in any research, one or a few core scientists are in charge of the most difficult part of the research. Adding more staff and resources can improve productivity in all but the key research areas. Larger teams also lack the flexibility of smaller teams and suffer from decreased efficiency.

The following table shows the relationship between the size of the R&D team and technological gain. If you are still unclear about the concept, consider this example: If a single-unit R&D team can gain 20 technology levels after

five years of research, then a three-unit R&D team can gain 48 (20 x 240%) technology levels after five years of research.

Number of R&D Units	Effect on linked together Tech Gain	Marginal Increase
1	100%	
2	170%	70%
3	240%	70%
4	295%	55%
5	350%	55%
6	390%	40%
7	430%	40%
8	455%	25%
9	480%	25%

Unit levels of the R&D team

Each increase of the unit level boosts the effect of the R&D plan by 20%, because more experienced scientists usually achieve better results.

Top Product Technology Level

If you are conducting research on a product for which a competitor already has a higher level of technology, which is being put to practical use in their product, the research time on that technology is shortened. You need less time to gain this knowledge because of the diffusion of technology and the use of special technology-acquisition techniques such as reverse engineering.

Application of Technology to Production

When a research period is complete, you can apply the results (the improved production technology) to your manufacturing units. Click the Apply Tech button to display the manufacturing units eligible for a technology upgrade and you are provided with the following options:

- Yes. You proceed, the new production technology is applied to the unit, and the quality of the manufactured products rises.
- If the unit's level is higher than level one, a message informs you that upgrading production technology will decrease the unit's level. The unit's level is downgraded because installing new production equipment and applying new production techniques means most workers' experience becomes obsolete. While they go through a new

learning process, their productivity drops. The number of levels that will be decreased is based on the difference between the new technology and the existing technology.

- No. Do not apply the technology to this manufacturing unit.
- All. Apply the technology to all eligible manufacturing units immediately without asking you one by one.
- Go. Go to the manufacturing unit so you can examine the unit in detail before applying to the technology.
- Quit. Cancel the action and quit the menu.

Researching and Developing New Products

There are new products that you can only produce after you have put in the right research efforts. To research and develop a new product, click the R&D new product button.

Unit Details

When you highlight an active R&D unit, the unit detail area shows the following information:

- **R&D Duration.** The duration of the R&D plan.
- **Progress.** The progress of the current R&D
- **Original Tech.** The original technology level.
- **Target Tech.** The target technology level.



Unit Info

The info-box of an R&D Unit in the layout area below shows the following information:



Product Name. The product currently being researched.

R&D Duration. The duration of the R&D plan.

R&D Progress. The progress of the current R&D plan

Purchasing Technology from other corporations

You may also attempt to purchase technology from your competitors - at a price of course. For more details please see the section on Headquarters.

Farm

Farm Size	Setup Cost	Monthly Cost
Medium	\$1,000,000	\$100,000
Large	\$1,800,000	\$180,000
Small	\$750,000	\$50,000

On a farm you can set up the following business function units specific to farms:

- Crop growing unit
- Livestock raising unit
- Livestock processing unit

And the following common units,

- Inventory unit
- Sales unit
- Advertising unit

On a farm, you grow crops and raise livestock. To grow crops, set up one crop growing unit and one sales unit and link them together.

Next, select a crop type for the crop growing unit. After sowing, growing, and harvesting, the unit moves the crops to the sales unit.

To raise livestock in a farm, set up a livestock raising unit, a livestock processing unit and a sales unit to sell the livestock products.

Select the livestock you want to raise in the livestock raising unit and the livestock product in the livestock processing unit. The units start operations immediately.

NOTE: Do not set the game speed to frozen during this process, because it prevents the livestock processing unit from obtaining information from the livestock raising unit, which means you won't see the appropriate choices when selecting the livestock product.

Crop Growing Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Crop growing units in farms grow and harvest crops. Once you tell a crop growing unit which crop to grow, it takes care of the growing and harvesting process and stores the harvested crops in its barn.

Growing a Crop

To grow a crop, press the Grow Crop button in the unit detail area. You see a menu where you select the crop you want to grow. The menu shows the sowing month and harvesting month. Consider the sowing month of the crop and the growing season. If you try to start a crop after its sowing season, the unit will just wait until the sowing season next year. Remember that the crop will not be available until the end of the harvest month.

Unit Details

When you highlight an active crop growing unit, the unit detail area shows the following about the crop:

- **Quality.** The quality rating.
- **Growth Days.** The number of days since the crop was planted.
- **Status.** Whether the crop is growing, being harvested, awaiting the season.



Unit Info-box



The info-box of the Crop Growing Unit in the layout area shows the following information:

Crop Name. The crop that the unit is currently planting.

Crop in Barn. When crops are harvested, they are stored in barns. Crops in barns are represented by boxes in the unit info-box. Each box represents a certain quantity of crops. You can see more boxes appear as crops are harvested and disappear as crops are sold.

Growth Progress. The crop's growth progress. When this bar reaches its maximum length, the crop is ready to be harvested.

Unit Level

The capacity of a crop growing unit improves as its unit level increases. The following table shows the relationship.

Unit Level	Capacity
1	100%
2	150%
3	200%
4	250%
5	300%
6	350%
7	400%
8	450%
9	500%

Livestock Raising Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Raising Livestock

To order a unit to raise livestock, press the Raise Livestock button in the unit detail area. The menu also shows which products you can make from each type of livestock. After you select a product, the livestock raising unit purchases livestock for breeding and begins the breeding-raising cycle.

Livestock Quality

The level of the functional unit determines the quality of the livestock products. A higher unit level indicates that the unit has more advanced equipment and the workers are more experienced. Livestock raised in these conditions are healthier and of better quality.

Unit Details

When an active Livestock Raising Unit is highlighted, the unit detail area shows the following information:



Quality. The quality of the livestock in the unit.

Baby Qty & Adult Qty. These two rows of boxes represent the quantity of baby and adult livestock in the unit. Baby livestock mature and become adult livestock. Different types of livestock have different growth rates. From fastest to slowest, the livestock growth rates are chickens, sheep, pigs, and cattle.

Unit Info

The info-box of the Livestock Raising Unit in the layout area shows the following information:



Livestock Name. The livestock the unit is currently rearing.

Baby & Adult Livestock. These two rows represent the baby and adult livestock in the unit.

Unit Level

The productivity and capacity of a livestock raising unit improves when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	120%	120%
3	140%	140%
4	160%	160%
5	180%	180%
6	200%	200%
7	220%	220%
8	240%	240%
9	260%	260%

Livestock Processing Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Livestock grow up in a livestock raising unit. They are then sent to the livestock processing unit, which can process the livestock into several useful products.

Processing Livestock

First, link the livestock processing unit to a livestock raising unit. Once the linkage is established, a Select Product button appears. Click it to display a menu where you can select the livestock product you want to produce. After you select one, the unit starts functioning and you see the livestock products appearing as a row of boxes.

If the livestock supply from the linked raising unit is less than the demand of the processing unit, more livestock in the raising unit are killed to meet the demand, resulting in an immediate increase in product output but decreases in the overall output over the long run.

Livestock Quality Product

The quality of the livestock and the level of the functional unit processing the livestock determine the livestock product quality. This reflects the fact that experienced workers and modernized facilities produce higher-quality products.

Unit Details

When you highlight an active Livestock Processing Unit, the unit detail area shows the following information:

- **Quality.** The quality of the livestock product in the unit.



Unit Info



The info-box of the Livestock Processing Unit in the layout area shows the following information

Product Name. The livestock being produced.

Product Stock. This area shows the product stock in the unit. Each box represents one cargo of the product. Each cargo can store a number of units of product and this number varies from cargo to cargo.

Livestock Supply and Process Capacity. The black bar is the livestock supply. The green bar is the process capacity. If the livestock supply bar is shorter than the process capacity bar the unit is under used and can process more livestock. Link additional input units to exploit the capacity.

Conversely, if the livestock supply bar is longer than the process capacity bar the unit has reached its full capacity and cannot process all livestock sent to it. Set up a new Livestock Processing unit to reduce the workload of the current unit. Alternatively, increase the training budget for a long term increase in productivity.

Unit Level

The productivity and capacity of a livestock processing unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Mine, Oil Well and Logging Camps

Firm	Setup Cost	Monthly Cost
Mine	\$5,000,000	\$300,000
Oil Well	\$5,000,000	\$300,000
Logging Camp	\$1,500,000	\$100,000

These three firms all produce raw materials, but each one specializes in different types of raw materials. The following section shows how to set them up.

Producing Raw Materials

First, locate a site with deposits of the natural resource you are interested in. If you have trouble finding that resource, click the Resource Map button within the mini map to get a view of all the natural resource reserves. Remember that the resource you require may not be available in the city you are viewing, or indeed in any other city in a multi-city game.

Next, build an appropriate firm at the location you have chosen as follows:

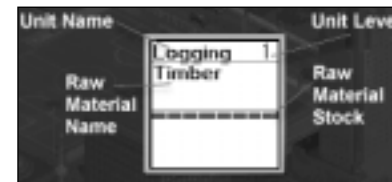
- For timber, build a logging camp.
- For oil, build an oil well.
- For other resources, such as aluminum and silica, build a mine.

As you know, a firm will not start operating until the appropriate units are properly set up inside it. First, set up the unit responsible for the production of raw materials. Each raw material firm requires a different type of unit to obtain the raw material, as shown below:

- Logging camp – logging unit
- Mine – mining unit
- Oil well – oil-extracting unit

Once this unit is set up, it starts to produce raw materials. To sell them, add a sales unit and link the two units. You now have a raw-materials firm.

Unit Info - Logging Unit

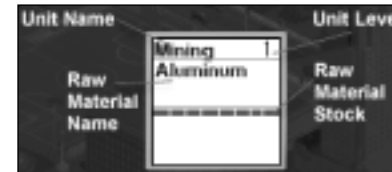


The info-box of the Logging Unit in the layout area shows the following information

Raw Material Name. The raw material currently being produced.

Raw Material Stock. The stock of raw material in the unit. Each box represents a cargo of material, the quantity of which varies depending on the raw material.

Unit Info - Mining Unit



The info-box of the Mining Unit in the layout area shows the following information:

Raw Material Name. The raw material currently being produced.

Raw Material Stock. The stock of raw material in the unit. Each box represents a cargo of material, the quantity of which varies depending on the raw material.

Unit Info - Oil Well Unit



The info-box of the Oil Well Unit in the layout area shows the following information:

Raw Material Name. The raw material currently being produced.

Raw Material Stock. The stock of

raw material in the unit. Each box represents a cargo of material, the quantity of which varies depending on the raw material.

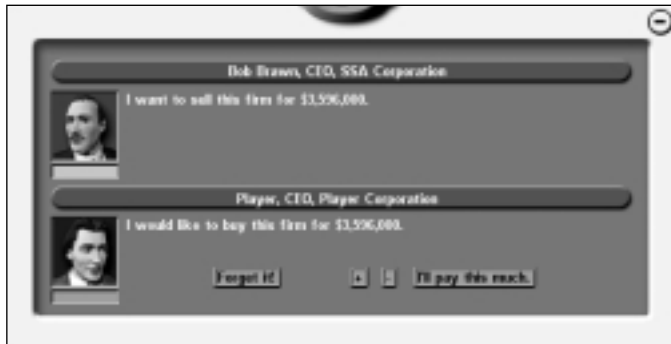
Selling & Buying Firms

You may decide to sell or buy a firm, or another corporation may offer to buy a firm from you. To sell a firm follow the procedure outlined below:



Putting a firm on the market

Open the firm you wish to sell and click the 'Offer to Sell Firm' button in the top right of the screen. A 'For Sale' sign will now be shown next to the firm in the main city view. You will have to wait until an offer arrives.

Receiving an Offer to Purchase



Other corporations may offer to buy a firm from you. When you do receive an offer, the negotiation window will pop up. From there, you may select the 'Go' button to be taken to the firm. If you wish to delay the potential sale

click the  to close the negotiation window - a flashing cross,  appears at the bottom right hand screen. Click this to return to the negotiation window.

You may choose to ignore the offer by clicking 'Forget It!', or you may accept the offer at the suggested price. If you wish to negotiate a better deal, use the +- spinners to adjust the price and press 'Confirm'. The corporation will consider the new price before rejecting or agreeing to it.

Placing an Offer to Buy a Firm

You may decide to offer to buy a firm belonging to another corporation. If you do, open the desired firm and click the 'Buy Firm' button. The asking price will be displayed and you may modify the price (using the +- spinners) or accept the price. If you decide not to purchase click the 'Forget It!' button to exit.

Looking for Firms to Buy

You can get a list of firms currently on sale by opening the Firm Summary Report and select the "Firm for sale" filter option. From there, you may click the "Buy" button to offer to buy the firm.

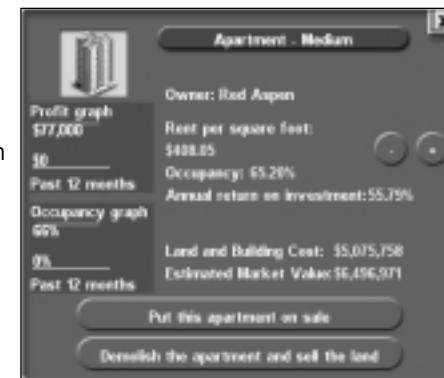
Apartment Buildings

Setup Cost	Monthly Cost
\$5,000,000 to \$10,000,000	\$100,000 to \$200,000

As well as building and running factories and stores, your corporation may also invest in real estate. Various sized apartment buildings may be constructed and offered to the city's populace to live in where you set the rent level. Generally, lower rents will attract more tenants but higher rents may increase profits.

Once you have built an apartment building, left click its image in the main city view and the Apartment Information window opens.

From this window you may alter the rent charged to tenants by using the +- spinners. You can also review the profit and occupancy graphs for the previous 12 months. Land and building costs are shown along with an estimated market value should you wish to sell or demolish the building. The annual return of investment is also displayed – this is updated every year.



Apartment Information window



Apartment For Sale

If you decide to sell the building click the *Put this apartment on sale* button and wait for offers from other corporations.

You may, of course, purchase an apartment building from another corporation. Look out for a For Sale sign on the side of the building. Left click the "Buy this apartment" button to open the negotiation window. Enter your price, and if it is accepted you will become the new owner of the building.

Potential occupancy levels depend on the following factors:

- **Economic climate of the city** – The better the economic climate, the higher the occupancy rate.
- **Spending level of the city** – The higher the spending level, the higher the occupancy rate.
- **Land value of the building** – The higher the land value, the higher the occupancy rate.
- **The rent** – The lower the rent, the higher the occupancy rate.

Commercial Buildings

Setup Cost	Monthly Cost
\$10,000,000 to \$18,000,000	\$200,000 to \$360,000

A commercial building is similar to an apartment building except that its tenants are companies requiring office space. For more detail regarding rents and the sale of the building, see 'Apartment Buildings' above.

Headquarters

Setup Cost	Monthly Cost
\$3,000,000	\$100,000

You may build several offices within your headquarters building and hire personnel to occupy key roles within your corporation.

When you build and first open your headquarters (by left clicking the building) you will see nine empty office units. Double click on any of the units and select a department or office from the drop down list. The

available choices are discussed below. Please note there are no links between units and your headquarters and that each department or office need only be represented once. Multiple units of the same type will not increase the effect or efficiency of that unit.



HQ Unit Types

Financial Department

This department allows you to set the share dividend pay out ratio (see Chapter 6 for more information). The unit is not available if the stock market has been disabled in the game set up menu.

Human Resource Department

This unit can be used to instigate corporate wide training and incentive programs. The unit details the total number of corporate employees, average employee level and average training expenditure per firm. Click the Organize an Extensive Training Program button and use the +- spinners to modify the cost per employee. The more you spend training employees, the faster they gain level experience and become more proficient in their tasks. Be warned that conducting training exercises too frequently may not be effective.

Public Relations Department

This unit should only be employed if your corporation is using a Corporate Brand strategy as it has no effect for Unique or Range brand strategy. Move the slider to alter the amount the department spends per month on increasing corporate brand awareness and brand loyalty. You are shown the current brand awareness and loyalty ratings. Increasing expenditure also helps to lessen the effects of negative brand loyalty.

Investor Relations Department

This unit is employed to help improve your corporation's stock attractiveness with investors with the aim of improving stock performance.

Move the slider to alter the amount the department spends per month on attracting investors.

Chief Executive Officer Office

This unit displays CEO information. Since you are the CEO of your company, you will see your portrait displayed on the screen.



You may give a salary to yourself by setting the *Chief Executive Officer's Annual Salary* using the slider below your portrait. The maximum amount of salary you can give to yourself is tied to the company's annual profit in the last year. The higher the profit your company achieved, the higher the salary you may receive.

You may offer to acquire a technology from another corporation by clicking the "Offer to Acquire a Technology" button. For details, please see *Chief Technical Officer Office* below.

Clicking the *Detail* button will take you to the *Person Report* in the *Information Center*.

Chief Operating Officer Office

Once this unit is built you may hire a COO to run any of your corporations' retail stores, factories or farms. The available candidates have attributes, strengths and weaknesses that may enable you to delegate control of corporate interests to them. For example, you may discover a candidate is skilled in manufacturing techniques and decide to hire that individual to run your corporations' factories.

To hire a candidate, click the *Look for Candidates* button. You are taken to the *Person Report* in the *Information Center*. You choose a person whom you want to hire and click *Hire Chief Operating Officer* button. For details, please see *Chapter 8 Personnel Management*.

Chief Marketing Officer Office

This unit enables you to hire someone to look after the marketing interests of your corporation. The marketing expertise of your CMO will influence any advertising units you have in your firms by increasing their efficiency. The unit level, however, will remain at 1. Your CMO is hired using the same process as COO.

Chief Technical Officer Office

This unit enables you to hire someone to look after the research and development interests of your corporation. Once hired, they will control all of your R&D firms, determining research project focus and timescales. Your CTO is hired using the same process as COO.

Furthermore, your CTO office provides the opportunity for your corporation to pay for the acquisition of technology from rival corporations. Open the CTO office and select the *Offer to Acquire a Technology* button. A list of all products for which you do not currently hold the highest technology rating appears. The list displays your technology rating and that of rival corporations. Highlight the Product for which you wish to acquire the technology and, if applicable, the corporation from which you wish to make the acquisition. Now decide how much you are willing to pay for the technology. If your rival accepts your offer, the technology advance will be immediately available. Don't forget to upgrade the manufacturing units of any factories already making use of the technology.

Mansion

Setup Cost

\$20,000 to \$60,000 depending on size

As a player you may purchase a mansion as a show of personal, rather than corporate, success and wealth. Whilst a mansion does not cost anything after the initial construction costs, it does not earn anything other than its sale price if you decide to sell it or reclaim the land upon which it stands. A mansion is purchased like any other building (by using the *Game Tools, Construction* menu) but the cost of land and construction is borne by the player and not the corporation. You may purchase as many mansions as your personal wealth allows.

To sell your mansion, left click on it in the main city view. You have two options: Put the mansion on sale for another player to purchase or demolish the mansion and sell the land on which it stood.

The sale of your mansion and the purchase of another player's mansion are similar to apartment and commercial buildings – see Apartment Buildings or *Selling and Buying Firms* above for more information.

Radio Station, Television Station and Newspaper Publisher

Each city starts with some radio stations, television stations or newspaper publishers. New television stations or newspaper publishers may appear over time.

You cannot set up television stations or newspaper publishers, but you can purchase and sell them. The purpose of the firm is to allow corporations to advertise their products. The procedures for arranging advertising are described in Chapter 7 Marketing, but this next section focuses on the information provided about a media firm.

Firm Details

Highlight a radio station, television station or a newspaper publisher to display information about the firm. A new screen is displayed showing the details of the selected firm.



The pie chart in the lower left of the area shows the share of each advertiser during the past month. The colors indicate which corporation purchased which portion. The graph to the right shows the market share of the media firm over the past 12 months.

Various useful figures about the media firm are displayed:

Content Quality. The quality of the media's content. A rating ranges from 0 to 100.

Rating Points. This measurement indicates the portion of potential audiences that receive messages from a specific media outlet. One rating point is equivalent to one percent of the potential audience that receives messages from a specific media outlet. It is calculated by dividing the reach by the coverage.

Advertising Cost (Cost Per Thousand). The cost to expose 1,000 people to an advertising message.

To purchase a media firm

Select the firm and click the Buy Firm button. A screen is displayed in which the current owner states the sale price. Below this you can decide to raise or lower the price using the +- spinners, or cancel the deal.



If you have enough cash and you decide to purchase the firm you will be able to set the following:

Extra monthly budget for new content development. The higher this budget is, the better the content of the media will become. This is an investment that you should make to improve the quality of your media firm's content, which will in turn increase the rating points and incomes.

Next month advertising pricing (Cost per thousand). By adjusting the advertising pricing you will affect the willingness of potential clients to buy advertising from your firm. The adjusted advertising price will become effective next month. A high rating points will enable you to charge a higher advertising cost, but it should not be set too high that it becomes uncompetitive.

Buildings

The following buildings are government owned and operated. They cannot be purchased, but offer services to your corporation.

Bank

The Bank can be used for arranging or repaying corporate loans. See Chapter 5, Reports and Guides, Financial Actions, for more information.

Information Center

Clicking on the building simply takes you to the Information Center screen. See Chapter 5, Reports and Guides for more information about what the Information Center has to offer.

Investment Bank

The Investment Bank is used to issue new shares. See Chapter 5, Reports and Guides, Financial Actions, for more information.

Stock Market

Clicking the Stock Market building takes you to the stock market section within the Information Center. See Chapter 6, Stock Market and Finance, for more information.

Chapter 5: Reports and Guides

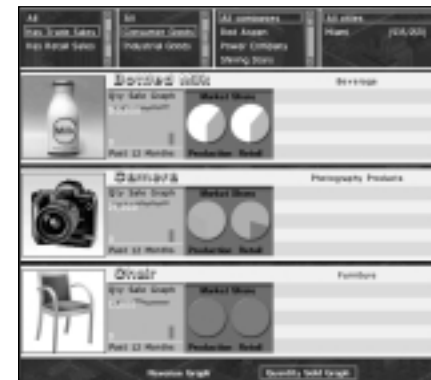
The following reports and guides are accessed via the Information icon on the Toolbar, found at the bottom of the Main City View screen, or by clicking the Information Center building.

Product Summary Report



from the *Game Tools* menu.

The Product Summary Report provides a quick and convenient way to browse product information.



Product Information

At the top of the display area of each product, the name of the product is on the left and the product class on the right side. The product class represents the family of products in which this particular product belongs. For example, chairs, sofas and beds belong to the Furniture product class. If your corporation operates using a Range Brand strategy (see Chapter 7, Marketing) it is important to know which products fall into which product class to maximize the benefits of the strategy.

Next to the picture of the product is a graph that can show either the total revenue or the total quantity sold over the past 12 months. Press the Revenue Graph button or the Qty Sold Graph button at the bottom of the window to choose which to display.

To the right of the graph, there are two pie charts. The left chart shows each producer's share in the market and the right one each retailer's share in the market. Each piece of the pie represents a different corporation's market share. The white portion, if shown, represents the combined market share of all local competitors.

There are local competitors in each city. Although their firms are not shown on the game map, they do compete directly with all of the corporations in the game. Sometimes, they can even be the major competing force in the market.

The product picture itself is a hypertext button. Click the button to display the Product Detail Report.

Display Filter

You can control the products listed in the report by setting the display filters. The four display filters are described below.

Product Availability Filter

The product availability filter has the following options:

- **All.** Displays all available products.
- **Has Trade Sales.** Displays only products available in the trade market.
- **Has Retail Sales.** Displays only products retailed by corporations.

Product Category Filter

The product category filter has the following options:

- **All.** Displays all product categories.
- **Consumer Goods.** Displays only consumer goods.
- **Industrial Goods.** Displays only industrial goods.

Corporation Filter

Set this filter to a corporation to list only those products being produced or retailed by that corporation. The default setting, All, lists every corporation.

City Filter

If this filter is set to All Cities, the report shows the combined sales of all products in all cities.

Set this filter to a specific city to list sales information for that city only. The browser also shows the population of each city.

Product Detail Report

The Product Detail Report provides complete information about a specific product. You can access the Product Detail Report any of the following ways:

- Call it up from the Information Screen.
- Click the product's picture in the Product Summary Report.
- Highlight a firm in the map and double-click the picture of a product in the firm.

As well as repeating the information available in the Product Summary Report, the Product Detail Report also displays product specific information.



If the product is for consumers, the report displays the average price, quality rating, brand rating, and overall rating of the goods that are being sold by local competitors in the city.

Next to the local competitor information, the average price, quality rating, brand rating, and overall rating of all goods from both corporations and local competitors are displayed.

When consumers buy a product, they usually consider several factors. Generally, the three most important factors are price, quality, and brand. The importance of these three factors, however, varies for each product. For example, when buying a pair of sport shoes, a consumer is more concerned about brand than price. In contrast, when buying a piece of frozen meat, a consumer is usually more concerned about price than brand. Based on consumer behavior, each product has a set of predefined values. These are price concern, quality concern, and brand concern. They are shown as percentages and their sum is always 100%. If a consumer buys a product with 50% price concern, 30% quality concern, and 20% brand concern, the foremost criterion in the consumer's mind is price with quality second, and brand third.

Necessity Index

In the top section of the report, the necessity index of the product is displayed next to the product picture. A high index value indicates that the product is necessary to people in their daily lives. The demand for necessary goods is fairly constant, because people must buy them even if the price they are offered is not attractive.

Conversely, the demand for non-necessary goods is influenced mainly by the attractiveness of the goods. Therefore, cutting the price does not always result in decreased profit, because the lower price can stimulate demand. This increased demand could offset or even surpass the reduced profit margin.

Product Browser

The product browser lists all of the products of the same type currently being sold in a specific city. The price, quality rating, and brand rating are shown for each product.

If you want to know more about a product, look at the information displayed below the product browser. These sections display the data related to price, brand, and quality in detail. By evaluating these data, you can determine the strengths and/or weaknesses of each competitor's product lines.

Like the Product Summary Report, the displayed graph can be toggled between *Revenue* and *Quantity Sold*.

Changing Selling Price

The Product Detail Report gives you all the essential information about the product, and also serves as the control center for battling your competitors in the marketplace. You can respond to your competitors by cutting your products' prices or raising your prices to increase the profit margin if the market is already under your control. To change the price of a product sold by your corporation, simply highlight that product and adjust the Price spinner. The new selling price takes effect as soon as you confirm the price.

Prev and Next Button

Click the Prev button to display the previous product or the Next button to display the next product. The products you can browse are limited to those currently sold in the selected city. By changing the city (select a new city name at the top right of the screen) you can see if the same products are being sold in another city. This is useful if you wish to target a new city with products you already sell (and perhaps manufacture) in another city.

Go Button

Click the Go button to go to the retail store that is selling the highlighted product.

Firm Summary Report

The Firm Summary Report lets you quickly browse the summary information of all firms.

Three filters at the top of the report let you limit the list to a specific type of firm, firms owned by a specific corporation, or firms in a specific city. To see only your factories, select Factory in the firm type filter and your corporation in the corporation filter. You may also select the "Firm for sale" filter option to see only firms currently for sale.



For the firm record, you see two graphs. The left one shows the firm's revenue for the past 12 months. The right one shows the firm's profit for the past 12 months. The color bar below the firm icon is the firm's corporate color. If the word delegate is displayed on the color bar, the control of the firm is delegated to your Chief Operating Officer or Chief Technical Officer. Other information shown includes:

- **City.** The city where the firm is located.
- **Years of Operating.** How many years the firm has been operating.
- **Lifetime Revenue.** Total firm revenue over its lifetime.
- **Lifetime Profit.** Total firm profit over its lifetime.
- **No. of Employees.** Total number of employees working for the firm.
- **No. of Units.** Total number of units in the firm.
- **Average Unit Level.** The average unit level of all units in the firm.
- **Average Utilization.** How busy your employees are. The firm is fully utilized when this ratio is 100%.

Click the Firm image or the Go button to close the report and go to the selected firm immediately.

Corporate Summary Report

This report shows the following information about each corporation:

- Financial overview
- Stock overview
- Firms overview
- Business relations



To find out more about a corporation, click its corporate logo to display the Corporation Detail Report. To go back to the Corporate Summary Report, click the Corp. Summary button at the bottom of the detail report window.

Financial Overview

This shows the following financial information about the corporation:

- **Cash.** The corporation's cash.
- **Annual Revenue.** Total corporate revenue over the past 365 days.
- **Annual Profit.** Total corporate operating profit over the past 365 days.
- **Profit Graph.** The corporation's operating profit over the past 12 months.

Stock Overview

The stock overview shows information about the corporation's stock.

- **Stock Price.** The corporation's current stock price.
- **Equity Per Share.** Calculated by dividing the shareholders' equity in the corporation by the total number of outstanding shares.

- **Earnings Per Share.** Determined by dividing the corporation's annual operating profit by the total number of outstanding shares.
- **P/E Ratio.** Calculated by dividing the stock price by the earnings per share.
- **Dividend Yield.** Dividends are the distribution of a company's earnings to the stockholders. The dividend yield is a percentage calculated by dividing the dividend by the stock price.
- **Total Return.** Total return to shareholders is calculated by dividing the total return on one share over the past 365 days by the stock price. This return includes the dividend received and profit gained from the rise of the stock price.
- **Stock Price Graph.** Shows the corporation's stock price over the past 12 months.

Firms Overview

This overview shows the total number of firms of each type that the corporation owns.

Business Relations

Relationships between your corporation and other businesses are shown in several ways. These relationships are reported based on how much trade has been conducted between the two businesses.

- **YTD Trade.** The value of the trade between the player's corporation and the displayed corporation in the current year.
- **Lifetime Trade.** The value of the trade between the player's corporation and the displayed corporation during their lifetimes.

Corporate Detail Report

You can find most of the information about a corporation in the Corporate Detail Report. The following sections are available:

- Overview
- Firms
- Products
- Graphs 1
- Graphs 2
- Stock

- Balance Sheet
- Income Statement
- Technology
- Advertising
- Brand
- Dominance
- Statements

Overview

The Corporate Detail Report has the following overview sections:



Management Overview

This shows the chairman and chief executive officer of the corporation and indicates their character. If a Chief Operating Officer has been hired, his/her portrait and character are also displayed. For computer controlled corporations the business strategy of the corporation is shown. This can be one of the following:

- **Diversified.** The corporation operates all kinds of firms.
- **Retail Focused.** The corporation opens only department stores.
- **Production Focused.** The corporation only produces products.
- **Stock Focused.** The corporation focuses on investing and speculating stocks of other corporations.

Financial Overview and Stock Overview

This shows some important financial and stock information. The information displayed is the amalgamation of the Corporate Summary Reports' Finance, Stock and Firms screens.

Firms Overview

This shows the total number of each type of firm that the corporation owns.

Firms

This report shows the total number of each type of firm that the corporation owns and their annual revenue and profit.

- **Annual Revenue.** Total revenue of all firms of a specific type owned by the corporation over the most recent 12-month period.
- **Annual Profit.** The total operating profit of all firms of a specific type owned by the corporation over the most recent 12-month period.

The report explains which types of firms are your corporation's main profit generators. When you plan changes to your corporation, make sure you sustain the profitability of these valuable firms. On the other hand, you also find out which firm's burden your corporation and limit its overall profitability. A shrewd manager finds this information critical to improving the company's profits.

This report reveals only the consolidated revenue and profit. If you need the profitability statistics for individual firms, refer to the Firm Summary Report (see above).

Products

This report lists the products that contribute to the revenue and profit of the corporation. It shows the following information about each product:

- **Annual Revenue.** Total product sales over the last 12-month period.
- **Annual Gross Profit.** Gross profit is the difference between the sales and the cost of the goods sold. Other operating expenses are not factored into this calculation.

In the default setting, the report shows all products being sold by the corporation. To limit the list to products that the corporation is currently producing, click the Production button at the bottom of the report. Also, you can click the Retail button to see only products that the corporation is currently retailing.

Graphs 1

This report contains 12 graphs. They show six different items about the corporation over two different periods: the past 12 months and the past 30 years.

- **Expenses.** The corporation's total operating expenses.
- **Net Profit.** A corporation's net profit is the sum of the operating profit and other nonoperating profits of the corporation. Because it includes the return on stock and increase in land value, this figure fluctuates when the stock price or the land value fluctuates.
- **Revenue.** The corporation's total operating revenue.
- **Net Worth.** Net worth, or shareholders' equity, of a corporation represents the resources invested by shareholders. It is the difference between a corporation's total assets and total liabilities.
- **Operating Profit.** A corporation's operating profit is the difference between the corporation's operating income and operating expenses. It tells how much the corporation has earned by producing and selling goods over a specific period.
- **Stock Price.** The price of the corporation's stock.

Graphs 2

This report contains 12 graphs. The graphs show the following information over the past ten-year period:

- **Cash.** The amount of cash that the corporation has on hand.
- **Inventory.** The total value of all raw materials and goods stocked in firms owned by the corporation.
- **Business Assets.** The total value of all business buildings and facilities owned by the corporation.
- **Land and Resources.** The value of the land and natural resources owned by the corporation.
- **Stock Assets.** The total value of stock that the corporation owns.
- **Total Loans.** The total loans that the corporation has borrowed.
- **Dividend Paid.** The dividend paid each year.
- **Stock Return.** The profit gained from the rise of the price of the stocks owned by the corporation and the dividend received from these stocks.

- **Salaries Expense.** The corporation's total salary expenses.
- **Advertising.** The total amount of the corporation's advertising spending.
- **Training.** The corporation's spending on staff training and procurement of new equipment.
- **Write-offs.** The corporation's business assets and inventories which have been discontinued are treated as write-offs.

Stock

There are two sections in the Stock Report. The first section lists the corporation's shareholders and shows their shares in a pie chart.

- **Shareholder.** The name of the shareholder.
- **Owned Qty.** The quantity owned.
- **Owned %.** The percentage owned, calculated by dividing the quantity owned by the total number of outstanding shares of the stock.
- **Stock Value.** The total value of the stock owned by the shareholder.
- **Position.** The shareholder's position in the corporation (CEO = Chief Executive Officer, CEO & C = Chief Executive Officer and Chairman).

A corporation can own stock of other corporations. The second section of the Stock Report shows the information about the stock that the current corporation owns.

- **Corporation.** The corporation name of the stock.
- **Price.** The current stock price.
- **Owned Qty.** The quantity owned.
- **Owned %.** The percentage owned, calculated by dividing the quantity owned by the total number of outstanding shares of the stock.
- **Stock Value.** The total value of the stock.
- **Subsidiary.** Whether the corporation listed is a subsidiary of the current corporation.

Balance Sheet

A balance sheet is a financial statement showing the corporation's assets (what the corporation owns), liabilities (what it owes), and the difference, called shareholders' equity or net worth.

Note that the balance sheet shows the amount of each account in three different periods:

- **Total.** The total amount of the account
- **YTD changes.** Year-to-date changes to the account.
- **Last Year Changes.** Last-year changes of the account.

Assets

Anything of value owned by a corporation is regarded as an asset. Assets are classified into the following categories:

- **Cash.** The amount of cash that the corporation currently has.
- **Inventory.** The total value of all raw materials, intermediate goods, and finished goods stocked in firms owned by the corporation.
- **Business Assets.** The total value of all business buildings and facilities owned by the corporation.
- **Land and Natural Resources.** The land and reserves of natural resources that the corporation owns.
- **Stocks.** The total value of stock that the corporation owns.

Liabilities

Anything that a corporation owes is regarded as liability.

- **Bank Loans.** The amount of money that the corporation has borrowed from banks.

Shareholders' Equity

- **Shareholders' Equity.** Shareholders' equity, or net worth, of a corporation represents the resources invested by shareholders. It is the difference between a corporation's total assets and total liabilities.
- **Common Stock.** The amount of money that has been invested directly into the corporation by shareholders. The account increases when new shares are issued and decreases when the corporation buys back its shares.
- **Retained Earnings.** The earnings that have been reinvested back into the business after dividends are paid to stockholders.

Income Statement

The income statement shows the corporation's business results. The corporation's income, expenses, and profit are displayed in dollars. The balance sheet shows the value for each account during four different periods:

- **Current Month.** The value for the account in the current month.
- **Last Month.** The value for the account in the last month.
- **YTD.** The year-to-date value of the account; the amount accumulated since the beginning of the current year.
- **Lifetime.** The value for the account accumulated in the corporation's lifetime.

Operating Revenue

The total operating income of the corporation is the consolidation of the operating income of all firms owned by the corporation.

Operating Expenses

A corporation has the following types of operating expense:

- **Cost of Sales.** The consolidated cost of sales, which includes costs of all raw materials, intermediate goods, and salable products purchased by all firms owned by the corporation.
- **Salaries Expenses.** This refers to the total salary expenses within the corporation.
- **Operating Overhead.** The fixed operating overhead of all firms owned by the corporation is reported here.
- **Advertising Spending.** The total amount of advertising spending by the corporation is reported here.
- **Training and New Equipment.** The corporation's spending on staff training and procurement of new equipment is reported here.
- **Write-offs.** Discontinued merchandise from the corporation's business assets and inventories are treated as write-offs.

Operating Profit

The operating profit of a corporation is the difference between the corporation's operating revenue and operating expenses. It shows directly how much the corporation has earned by producing and selling goods over a specific period. Since the ultimate goal of most corporations is to earn as much money as possible, this single figure means a lot to a corporation. Due to its importance, the annual operating profit of a corporation is also displayed in various other reports and screens for quick reference.

Other Profit

The other profit section of an income statement includes the nonoperating incomes and expenses of the corporation.

- **Stock Return.** The profit gained from the rise of the price of the stock owned by the corporation and the dividend received from this stock.
- **Increase in Asset Value.** The increase in the value of assets by the corporation.
- **Loan Interest.** The loan interest paid by the corporation to the bank.

Net Profit

Add a corporation's other profits to its operating profits to get the net profit of the corporation. It includes all sources of profit that a corporation generates over a specific period.

NOTE: Because the net profit includes the fluctuation of the value of the stock owned by the corporation, it may rise over time. Thus, it may not be a sufficient indicator of the actual profit-earning ability of the corporation. For this reason, when we refer to profit or earnings, it always means the operating profit instead of the net profit.

Technology

The Technology Report shows the following information about a product.

- **Product.** The name of the product. If a diamond appears in front of the product name, the corporation is currently producing the product.
- **Current Tech.** The current production technology level of the product.
- **Top Tech.** The top production technology level of the product in the world. At the beginning, the top technology level of all products is 100. When a product with a higher technology level enters the market, the top technology level is updated accordingly.
- **Target Tech.** The target production technology level that is reached when the current research and development (R&D) plan is complete. Nothing is shown here if there is no R&D plan on the product.

- **R&D Progress.** The red bar shows the progress of the current research and development (R&D) plan. To the right of the bar, you see the duration of the R&D plan and the number of R&D units involved in the R&D plan. Nothing is shown here if there is no R&D plan on the product.

The report can show either technology information for products that the corporation is currently researching or technology information for all products. Toggle between each information set by using the All and Products with R&D Only buttons. If you click the **Go** button, the game will jump to display the R&D unit conducting the research.

For more information about production technology, see **Manufacturing Unit** on page 47. For more information about R&D plans to improve your corporation's production technology, see **Research & Development Unit** on page 55.

Advertising

This report lists all the products advertised by the selected corporation. The following information is shown in the report:

- **Product.** The product being advertised.
- **City.** The city in which the product is being advertised.
- **Brand Rating.** The current brand rating of the product.
- **Monthly Ad. Spending.** The monthly advertising spending of the product.
- **Daily Ad. Freq.** The daily advertising frequency indicates the number of times a target audience is exposed to an advertisement in a day.
- **Rating Points.** A measurement of the portion of potential audiences receiving messages from a specific media vehicle. One rating point is equivalent to 1 percent of all of the potential audiences receiving messages from a specific media vehicle.

You can sort the list by product name or city name. You can change the sorting order by clicking on the buttons on the lower part of the report.

Brand

This report shows brand information of any corporation in any city instantly. The information in this report is straightforward. See Chapter 7 Marketing for more information relating to brands.

Switching Brand Strategy

This report is somewhat different from the other reports, because you can switch your corporation's brand strategy here. The selected button in the upper left indicates your corporation's brand strategy:

- **Corporate Brand.** A single brand covers all products.
- **Range Brand.** A brand covers a range of products.
- **Unique Brand.** Each product has a unique brand.

To switch to a new brand strategy, click the button you want. You are warned that your products will be labeled with new brands and brand ratings of all your products will be set to zero as a result. To proceed, answer Yes to start the brand replacement immediately.

Decide the brand strategy of your corporation at the beginning of the game. Switching brand strategy after brands have been established leads to a loss of the hard-earned brand rating. This also gives your competitors an advantage in competing with your products while you are re-establishing your brands.

Dominance

This reports the results of the corporation's market dominance in various industries and different markets. It shows the corporation's market share and position in each industry and market.

You control the display range by clicking one of the three buttons at the bottom of the report:

- **All.** Show all industries and markets.
- **With Market Share.** Show only those products for which the corporation has market shares.
- **Only Dominated.** Show only those products which are dominated by the corporation.

Statements

This report shows financial statements that are important in determining whether a corporation is gaining or losing ground in the unending struggle for profitability and solvency. Each financial statement is explained below:

- **Net Worth.** The difference between the corporation's total assets and total loans.
- **Market Value.** The corporation's market value is calculated by multiplying the corporation's stock price by the total number of outstanding shares of the corporation.
- **Cash.** The cash that the corporation currently has on hand.
- **Annual Revenue.** The corporation's total revenue over the past 365 days.
- **Annual Operating Profit.** The corporation's total operating profit over the past 365 days.
- **Annual Net Profit.** The corporation's total net profit over the past 365 days.
- **Total Assets.** The sum of the corporation's assets. The individual asset details are shown in the corporation's balance sheet.
- **Total Loans.** The corporation's total bank loans.
- **Stock Asset.** The total value of stock that the corporation owns.
- **No. of Years of Operating.** The number of years that the corporation has been operating.
- **Total No. of Employees.** The total number of employees includes those working for the corporation in all firms.
- **No. of Product Classes.** The total number of classes of product which the corporation is currently producing.
- **No. of Product Types.** The total number of product types which the corporation is currently producing.
- **Return on Equity.** The annual return on the capital invested by the ordinary corporate shareholders as a percentage. It can be calculated by dividing the corporation's annual profit by the shareholders' equity of the corporation.
- **Return on Total Assets.** This is the percentage calculated by dividing the corporation's annual profit by the total assets of the corporation. It gives you a brief idea about the profit-generation efficiency of the assets of the corporation.

• **Dividend Yield.** The dividend yield is a percentage calculated by dividing the dividend by the stock price.

• **Total Return to Investors.** The total return to investors is a percentage calculated by dividing the total amount of return on one share over the past 365 days by the stock price. The return includes the dividend received and profit gained from the rise of the stock price.

• **Operating Profit Margin.** The operating profit margin tells you how profitable the corporation's products are to manufacture and sell. It is a percentage calculated by dividing the corporation's annual operating profit by the corporation's annual income.

• **Net Profit Margin.** The net profit margin measures a corporation's profitability after all costs and expenses have been paid. It is a percentage calculated by dividing the corporation's annual net profit by the corporation's annual income.

• **Inventory Turnover.** The relationship between the corporation's annual sales and the value of the corporation's inventory. It indicates the number of times that the inventories turn over and can be calculated by dividing the corporation's annual sales by the value of the corporation's inventory.

• **Assets Turnover.** The relationship between the corporation's annual sales and the value of the corporation's total assets. It indicates the number of times that the assets turn over and can be calculated by dividing the corporation's annual sales by the value of the corporation's total assets.

• **Equity-to-Assets Ratio.** The equity-to-assets ratio is a measure of the financial strength of the corporation. A high ratio indicates that the corporation is financially healthy because its assets are mostly financed by its own capital instead of loans. This ratio can be calculated by dividing the corporation's equity by the corporation's total assets.

Financial Report

The Financial Report displays one of the following financial statements:

- Corporate Balance Sheet
- Corporate Income Statement
- Firm Income Statement

Firm Income Statement is only available when you access the Financial Report by clicking the "\$" button on the firm detail screen. It shows the income statement of the current firm.

Corporate Balance Sheet and *Corporate Income Statement* are the same as those in *Corporate Detail Report*. They are here for your quick access.

Person Report

The Person Report shows information about all persons active in the game. Some of these people compete directly with you in the marketplace while the rest are investors and speculators who are more interested in trading stocks than starting up businesses themselves.

You will see two browsers in the upper section of the report. The one on the left lists all of the people and lets you select which person's information you want to see. The one on the right is the topic selector, which lets you select the information to display in the report. The topics available include:

- **Summary.** Lists a summary of each person.
- **Wealth.** Displays the person's wealth status.
- **Career.** Displays the person's career status.
- **Personality.** Displays the person's personality.
- **Expertise.** Lists a summary of a person's skills
- **Score.** Displays a person's game score.

Player	Main Investor	Collaborator Stock Job
Character: Human Player Job Title: CEO & Chairman Corporation: T. Player Co.	Character: Aggressive Job Title: Independent Investor Corporation:	Character: Conservative Job Title: Independent Investor Corporation:
Cash: \$61,000,000 Stock: \$242,000,000 Total Wealth: \$303,000,000	Cash: \$1,095,071 Stock: \$6,984,000 Total Wealth: \$8,079,071	Cash: \$4,707 Stock: \$28,700,000 Total Wealth: \$28,704,707

Summary

This report displays the person summary information. The information displayed includes:

- **Character.** The character determines how the person manages his/her business. Character is described as: conservative, moderate, aggressive, or very aggressive.
- **Job Title.** Job title refers to whatever titles the person has earned through running or acquiring companies. CEO stands for Chief Executive Officer.
- **Corporation.** The corporation which the person is operating.
- **Cash.** The total cash this person owns.
- **Stocks.** The total value of stocks this person owns.
- **Total Wealth.** This person's total wealth, calculated by adding the value of the cash and stocks.

Wealth

The information shown in this section covers the following areas:

Personal Wealth

- **Cash.** The total amount of cash this person owns.
- **Stocks.** The total value of stocks this person owns.
- **Total.** The person's total wealth including cash and stocks.

Owned Stocks

- **Corporation.** The name of the corporation whose stock is owned.
- **Price.** The current price of the stock.
- **Owned Qty.** The quantity of stock.
- **Owned %.** The percentage owned is calculated by dividing the quantity of the stock owned by the total number of outstanding shares of the stock.
- **Stock Value.** The total value of the stock.
- **Position.** The position the person holds in the corporation. (CEO = Chief Executive Officer; CEO & C = Chief Executive Officer and Chairman)

Career

- **Corporation.** The corporation which the person is operating.
- **Job Title.** Whatever titles the person has earned through running or acquiring companies. CEO stands for Chief Executive Officer.
- **Years of Service.** The number of years the person has been working for the corporation.

If the person is available you may hire them in the capacity of Chief Operating Officer, Chief Marketing Officer or Chief Technical Officer by selecting the appropriate button.

If your corporation already hires the person, their salary and option to terminate their contract are also displayed. Beneath this information the person's management policies are displayed. You may alter how the person approaches pricing, internal sale, and the acquisition of better suppliers and products.

For more information regarding on-staff hiring see the section on Headquarters in Chapter 4 Buildings, Firms and Units.

Personality

In the game, each computer player has an individual personality. See Chapter 4, Headquarters, for details.

Expertise

If you set the Competitor Expertise Level option in the new game setting menu to on, some of the computer players will have expertise. This report shows the expertise of individual computer players. See Chapter 4, Headquarters, for details.

Game Score

A person's game score is determined by the following criteria:

- The wealth of the person.
- The market value of the corporations controlled by the person.
- The number of industries dominated by the person's corporations.
- The number of products dominated by person's corporations.
- The difficulty rating of the game.
- In a campaign game, if the player has achieved all the goals, the player will be rewarded with a bonus score.
- In a normal game, if the player has been in the game for more than 50 years, the game score decreases accordingly. This rule keeps the player from obtaining a high score simply by accumulating profit as time passes.

Goal Report

The Goal Report shows the goals you are working toward and your progress toward achieving those goals.



Normal Game

In a normal game, the ultimate goal is to dominate all industries. The Target column lists the names of industries and the Achieved column shows whether or not you have dominated the industry.

Campaign Game

In a campaign game, the Goal Report shows the total number of years you have to complete the campaign game, as well as the number of years that have passed since the beginning of the game. The difference between these two numbers is the number of years you have left to achieve the goals. You lose the game if you cannot accomplish all the goals within the allotted time.

There can be one or more goals for you to accomplish. These goals are listed in the Goal Report. The Target column shows the target value of the goal, the Current column shows your current value, and the Achieved column shows whether or not you have achieved that goal.

For example, suppose the goal description column reads Annual Operating Profit of Your Corporation, the target column is \$100 million, and the current column is \$16 million. These values would indicate that your corporation's annual operating profit must reach \$100 million in order to complete the goal, but that they are currently only \$16 million. From this information you can estimate how far you are in meeting the goal.

Score Report

The Score report indicates the current game score of the player and details how it is calculated.



Billionaires 100

This report shows the top 100 billionaires in the world. If your wealth makes you eligible to enter the chart, you see your name next to those celebrities. That honorable achievement deserves to be recorded.

If you want to see only billionaires who appear in the game, you can select the Local Billionaires option in the upper right corner of the report.

Manufacturer's Guide

This guide can be used to investigate which products are required to produce others.



The display above depicts the products required to manufacture a Car – in this instance Car Body, Engine and Wheel & Tire. These three items are the raw materials. The overall quality of the Car is 30% determined by the Production Technology and 70% determined by its raw materials: 30% each for the Car Body and Engine and the remaining 10% by the Wheel & Tire unit. For an in depth analysis of manufacturing and quality aspects, see Chapter 4.

Click More to see what other products the raw material forms or click the product picture to discover what materials it is derived from.

Use the Previous or Next arrows (top right) to see other products. If you wish to search for a particular product, click the Input or Output buttons and select the product from the list.

Farmer's Guide

This report lists the crops and livestock available in the game. The following two tables summarize the information.



Crop	Sowing Month	Harvest Month
Cocoa	April	October
Coconut	August	April
Corn	August	April
Cotton	February	June
Flax	August	April
Grape	July	December
Lemon	August	April
Rubber Plant	May	February
Strawberry	February	August
Sugar Cane	March	September
Tobacco	November	March
Wheat	August	April

Livestock		Products	
Cattle	Frozen Beef	Leather	Milk
Chicken	Frozen Chicken	Eggs	N/A
Pig	Frozen Pork	Leather	N/A
Sheep	Frozen Lamb	Leather	Wool

Please note that in-game there is no difference between leather produced by cattle, pigs and sheep.

To understand how each crop or livestock product may be used refer to the Manufacturer's Guide below.

Manager's Guide

This guide details the contents of each unit located in the layout section of firms. Units are discussed in-depth in Chapter 4.

Chapter 6: Stock and Finances

The Stock Market

Before you start investing in the stock market, you should be familiar with some basic stock concepts. Open up the Stock Market information screen by pressing the Information icon on the Toolbar and choose "Stock Market" from the left-hand menu or if the Game Tools menu is open, click the Stock Market icon. Alternatively click the Stock Market building in the main city view.



Information



Stock Market

The screen now shows six browser windows, each with specific stock information. Before each window is fully explored, take a moment to read the following list to familiarize yourself with some of the terms used in the rest of this chapter.

- **Stock Price.** The market determines the stock price.
- **Total No. of Shares.** A company's total number of shares.
- **Equity Per Share.** Equity per share is calculated by dividing the amount of shareholders' equity by the number of shares.
- **Earnings Per Share.** Earnings per share is determined by dividing the amount of operating earnings over the past 365 days by the number of shares. Operating earnings are used in the calculation instead of net earnings because of game design considerations. This ensures that the stock price correctly reflects the profit-earning ability of the corporation and is not affected by the price fluctuation of stocks that the corporation owns.
- **Price/Earning (P/E) Ratio.** The P/E ratio is the relationship between the price of a stock and its earnings per share. The P/E ratio is calculated by dividing the stock price by the earnings per share. A stock selling at \$30 with earnings of \$2 per share has a price/earnings ratio of 15.

The P/E ratio can be thought of as the number of years it will take the company to earn back the amount of your initial investment assuming that the company's earnings stay constant. Let's say you buy 100 shares of a stock selling at \$30 for \$3000. Current earnings are \$2 per share, so your 100 shares will earn \$200 in one year, and the original investment of \$3000 will be earned back in 15 years.

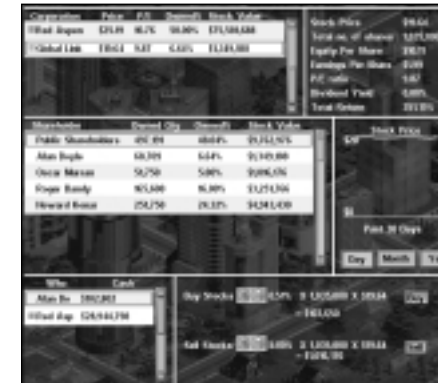
This may give you the impression that stocks with low P/E ratios are

more attractive than stocks with higher P/E ratios. However, it is not always true. You should also consider the profit growth potential of the company.

A stock with a high P/E and a high profit growth rate may outperform a low P/E slow grower over the long run.

- **Dividend Yield.** Dividend is the distribution of a company's earnings to stockholders. Dividend yield is the percentage calculated by dividing the dividend by the stock price.
- **Total Return.** The total return to shareholders is the percentage calculated by dividing the total return amount by the stock price. The total return amount includes the dividend and profit gained from the rise of the stock price over the past 365 days.

The Stock Market Windows



Stock Browser

Company	Price	P/E	Owned%	Stock Value
Wind Aspen	\$9.41	229.54	10.65%	\$5,112,828
Power Comp	\$136.54	13.12	0.03%	\$8.00
Phat Group	\$81.93	18.63	0.03%	\$8.00

The Stock Browser window shows the stock available on the market.

- **Company.** The name of the corporation.
- **Price.** The stock price.
- **P/E.** The stock's price/earnings ratio.
- **Owned%.** The percentage of the total number of shares owned by the current investor or investing corporation.
- **Stock Value.** The value of the stock owned by the current investor or investing corporation.

Stock Price	\$9.41
Total no. of shares	6,000,000
Equity Per Share	10.00
Earnings Per Share	0.04
P/E Ratio	229.54
Dividend Yield	0.00
Total Return	(33.57)

More details about the currently selected stock can be seen in the **Detail Browser** (as seen on the left). In this window you will see all the terms listed at the head of this chapter.

Shareholder Browser

Shareholder	Owned Qty	Owned%	Stock Value
Public Shareholders	5,360,802	89.35%	\$50,427,998
Alan Doyle	639,198	10.65%	\$6,012,808

The shareholder browser is under the Stock Browser. It identifies existing shareholders of the highlighted stock.

- **Shareholder.** The name of the shareholder.
- **Owned Qty.** The number of shares owned by the shareholder.
- **Owned%.** The percentage of the total number of shares owned by the shareholder.

To the right of this window the **Stock Graph** window shows the stock price over a specific period. You can select the period (past 30 days, past 30 months, or past 30 years) by clicking the corresponding button below the graph.



Investor Browser

Who	Cash
Alan Doyle	\$782.92
Red Aspen	\$53,843,492

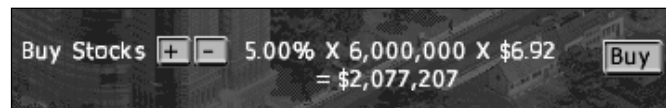
The investor browser in the lower left of the screen lets you select the person or corporation that will be investing in the stock market. The available selections are the player as an individual and the corporations controlled by that player.

- **Who.** The investor or the investing corporation.
- **Cash.** The amount of cash the investor has.

Buying and Selling to the Public

To buy stocks from or sell stocks to public shareholders, follow these steps:

1. Select which person or corporation will buy or sell the stock in the investor browser.
2. Select the stock that you are going to buy or sell in the stock browser.
3. At the lower right, you see something similar to the example shown below:



In this example, there are 6,000,000 outstanding shares of stock and you are going to buy 5.00% of the total at \$6.92 per share. The total price is \$2,077,207. If you are satisfied with these conditions, click the Buy button to buy the stock.

Use the same process to sell stocks. Just click the Sell button instead of the Buy button.

For information about buying stock from nonpublic shareholders, see Tender Offer below.

Buying Back Shares

If a company buys back its shares, those shares are taken out of circulation and the supply of outstanding shares is reduced. This can have a positive effect on the earnings per share, which in turn has a positive effect on the stock price. If a company buys back half its shares and its overall earnings stay the same, the earnings per share double. Few companies could get such an increase in earning per share by merely cutting costs or selling more goods.

Buying back shares also strengthens the owner's control of the corporation and reduces the risk of being taken over.

The procedure for buying back shares from public shareholders is not much different than normal stock buying. The steps are:

1. Go to the Stock Information screen.
2. Select the corporation as the buyer in the investor browser.
3. Select the stock of the corporation in the stock browser.
4. Set the percentage of total outstanding shares to buy and press the Buy button.

Because the stock you buy back is taken out of circulation, the ownership percentages of all shareholders, except public shareholders, will increase.

For example, suppose your corporation has 1,000,000 outstanding shares. You, the CEO, own 50% of the stock, or 500,000 shares of your corporation, and the other 50% of the stock is owned by public shareholders. If your corporation buys back 5% of its shares from public shareholders, 50,000 shares are taken out of circulation, and the total number of outstanding shares is reduced to 950,000. After this change, you own 52.63% of the stock (100% times 500,000 over 950,000) and the public shareholders own the remaining 47.37%.

For details about buying back shares from nonpublic shareholders, see Tender Offer below.

Tender Offer

Tender offer is an offer to buy shares of a corporation, usually at a price in excess of the value of the shares on the stock market. A tender offer is necessary only if all shares of the stock that you are interested in are in the hands of nonpublic shareholders.

To buy shares from nonpublic shareholders, do the following:

1. Go to the Stock Information screen.
2. Select which person or corporation will buy stock in the investor browser.
3. Select the stock you are interested in from the Stock Browser.
4. Select the shareholder from whom you want to buy stock.
5. If you are going to buy stock from a corporation that you control, you can just set the percentage of the stock you want to buy and press the Buy button. The transaction is done at the current stock price.

If you are going to buy stock from a shareholder who has no relationship with you, you must offer the shareholder a price in excess of the market value of his stock.

6. Set the price that you are willing to offer in the window. Your offer must be above the current stock price to entice the shareholder to sell. After you have settled on a price, click the Offer button to make the offer.

If the shareholder is not satisfied with your offer, the shareholder will reject it and demand a new price. If you think it is still an attractive price, accept it to complete the transaction.

NOTE: Some shareholders will refuse to sell their shares no matter how much you offer them because their main interest is in controlling the corporation.

Takeover

If a person or a corporation acquires more than 50% of a target corporation, that person or corporation takes over the target corporation. After the takeover, the chairman of the acquiring corporation becomes the new chairman of the target corporation.

In a corporation, the chairman is in charge of stock investment and the Chief Executive Officer (CEO) is fully responsible for all day-to-day management. Once you have taken over a target corporation, you immediately gain the right to use the cash supplies of the corporation for stock investment.

To maintain control over a corporation, you possess at least 50% of the corporation's stock. If the percentage you own falls below 50%, you lose control immediately. If no single shareholder owns more than 50% of the corporation's stock, control reverts to the corporation's CEO.

Mutual control can happen. That is, corporation A owns more than 50% of corporation B's stock and corporation B owns more than 50% of corporation A's stock. If this occurs, ultimate control belongs to the corporation that first initiates the takeover.

Merger

A merger results when two corporations combine. In the game, if a corporation owns at least 75% of another corporation, the corporation can execute a merger with the controlled corporation.

To execute a merger, open the Stock Information screen. The Merger button (below the Buy button in the stock buying section) is displayed if your corporation owns at least 75% of another corporation. Click the Merger button to display a window that explains you must acquire the remaining shares of the target corporation to accomplish the merger. You have two choices to perform a merger. You can either pay cash equal to the value of the remaining shares of the company you want to take over, or you can issue new shares of your corporation in exchange for the value of the stock held by shareholders in the company you are buying out.

If you prefer to issue new shares, be reminded that it will dilute the shares of existing shareholders, including yourself, and introduce new shareholders into your corporation. Although a rare event, it is possible that after you issue new stock, the shareholders of the target corporation in the merger could own more than 50% of your corporation and gain control of your corporation as a result.

If a merger is successful, all the target corporation's assets are consolidated into the acquiring corporation. The acquiring corporation also acquires the target corporation's technologies. The target corporation ceases to exist and the merger is complete.

After the merger, all the target corporation's products are labeled with the acquiring corporation's brand. If the acquiring corporation is pursuing a unique brand strategy, the brand rating of all these products is reset to zero.

Stock Trading Regulation

To prevent you from manipulating the stock market, you must follow these regulations:

- You cannot use a corporation that you control to buy a stock in which you have ownership.
- You cannot use a corporation that you control to buy a stock in which your corporation has ownership.
- Your corporation cannot buy a stock in which you have ownership.

Issuing Shares and Paying Dividend

Issuing New Shares

One of the most common ways a corporation raises new capital is by issuing new shares. When new shares are issued, the shares are offered to public shareholders. The cash received from the sale of stock is deposited into the operating capital of the corporation.

Access the Issue New Shares screen by either clicking Financial Actions from the Information menu or by locating and selecting the government run Investment Bank in the main city view.

When your corporation issues new shares, you must make two decisions. First, you must decide the issuing price. It can be any amount lower than the current stock price. (If the price were higher than the current stock price, nobody would buy the new shares.) Second, you must decide how many new shares to issue. The limit on the number of new shares you can issue depends on the following:

- **Profitability of your corporation.** Investors will welcome your stock if your corporation is showing some promising results.
- **Issuing price.** If the new shares are offered at a lower and more attractive price, more investors will want to buy them.

- **Frequency of issuing new shares.** New shares cannot be issued too frequently. You must give the market time to absorb the new shares.

In the Issue New Shares screen, the maximum number of the shares you may issue is displayed. In addition to considering the maximum number of shares that can be issued, you should also consider the following:

- **Total number of shares outstanding.** The impact on the existing shareholders will be greater if the number of new shares to be issued is closer to the total number of shares outstanding.
- **Current stock price.** The issuing price cannot exceed the current stock price.
- **Expected gross receipt.** The expected amount of money your corporation will receive by issuing new shares.

Although issuing new shares is an effective means of rapidly generating new funds, it does have a major drawback. Issuing new shares reduces the ownership percentage of existing shareholders. Because you also own less of your company after you issue new shares, you could open your company to a hostile takeover. If issuing new shares provides any corporation or investor with the opportunity to own more than 50% of your corporation, the danger of a hostile takeover is not worth the new capital that you might raise.

Paying Dividend

You have to decide whether to pay out the corporation's earnings or retain those funds for reinvestment in the firm. Although the dividend policy of a normal corporation has no long-term effect on its share price, in practice, most corporations try to pay a steadily increasing dividend. This provides investors with signals about management's expectations for growth and its ability to generate more earnings.

You can set a dividend payout ratio for your corporation and automatically pay dividends based on this ratio each year. Under this policy, the dividend per share is calculated by multiplying the earnings per share by the dividend payout ratio.

To be able to alter the dividend you must first build your corporate headquarters and add a financial department. Open the financial department unit and select the Set Dividend option. Set the dividend payout ratio using the spinner and press the Select button when you are satisfied with your selection.

The dividend payout ratio is initialized to zero when the game starts.

Finance

Borrowing and Repaying

To borrow or repay a bank loan, you must first click the government run Investment Bank in the Main City View, or choose the Share Issue and Bank Loan screen as detailed above (Issuing Shares, page 107). The Loan Screen opens with the following information:

- **Total Loan.** The total loan your corporation has borrowed.
- **Monthly Interest.** The monthly interest your corporation needs to pay.
- **Credit Limit.** The maximum amount your corporation can currently borrow. This is determined by two factors: the equity and profitability of your corporation
- **Interest Rate.** The current interest rate, which fluctuates from time to time.

Under this information are two sets of spinners and buttons, one for borrowing and another for repaying. To borrow or repay a loan, set the amount you want and press the Borrow or Repay button.

NOTE: The interest rate of your loan is floating. The amount of interest your corporation pays rises and falls with the current interest rate.

Out of Cash and Bankruptcy

If your corporation runs out of cash, a window pops up and you are forced to take one of the following actions:

- Borrow bank loan
- Issue new shares
- Sell stocks
- Close down firms
- Declare bankruptcy

If you decide to raise funds by taking out a bank loan, issuing new shares, or selling stocks, you are directed to the appropriate menu to carry out the transaction. For more information, refer to Borrowing and Repaying above, Issuing New Shares on page 107, and Buying and Selling to the Public on page 104.

If you have exhausted every means of raising cash and still cannot meet your financial obligations, then your corporation must face the ultimate misfortune – bankruptcy. Once your corporation declares bankruptcy, all of the corporation's firms are closed down and the land is sold. A report shows the remaining cash after selling off all land and stocks owned by your corporation. If there is any cash remaining, the cash is used to repay the bank loan. If any cash remains after repaying the bank loan, the cash is distributed to the shareholders.

If your corporation goes bankrupt, you lose the game. The Bankruptcy Report is displayed, followed by the Final Score Report, which shows your final score in the game, and then the game ends.

Chapter 7: Marketing

Overall Rating

In the game, each product is given an overall rating. This rating serves as an indicator of the overall attractiveness of the product.

The overall rating is determined by:

- **Price.** The higher the price, the lower the overall rating.
- **Quality Rating.** The higher the quality rating, the higher the overall rating.
- **Brand Rating.** The higher the brand rating, the higher the overall rating.
- **Price Concern.** Determines the weight of price in the overall rating.
- **Quality Concern.** Determines the weight of quality rating in the overall rating.
- **Brand Concern.** Determines the weight of brand rating in the overall rating.

Price, Quality & Brand Concern

When a consumer buys a product, the product's price, quality, and brand are considered. However, the relative concern consumers place on these factors varies from product to product.

Some products, such as frozen meat, are very difficult to apply a brand to because they lack differentiating features. Consumers generally buy based on quality and price with little concern for the brand name.

On the other hand, for products such as soft drinks, the brand name is much more important when consumers make their purchasing decisions. Some consumers may continue to purchase a product to which they are loyal, even if competitors offer products of superior quality and at a lower price.

Based on this consumer behavior, each product has a set of predefined values. These values include price concern, quality concern, and brand concern. They are shown as percentages and their sum is always 100 percent (that is, when a consumer buys a product with 60 percent price concern, 30 percent quality concern, and 10 percent brand concern, the foremost concern is price. Quality is second and the brand is least important.)

These concerns vary slightly from city to city because of cultural variations among cities. To find out the concerns for a specific product in a specific city, refer to the Product Summary Report (page74) or the Product Detail Report (page76).

Overall Rating & Product Demand

Most people will prefer a product with a higher overall rating. This does not, however, imply that goods with a lower overall rating are destined to fail in the market. There is always a group of consumers who are more price-sensitive and will buy a lower-cost product even if it has a lower overall rating. Thus, you can still compete successfully in the market by becoming a cost or quality leader.

Calculating the Overall Rating

Since the overall rating is calculated automatically by the game, you don't need to understand how it's calculated. The following formula is for your reference only.

$$\text{Rating} = \frac{\text{QR} \times \text{QC}}{60} + \frac{\text{BR} \times \text{BC}}{60} + \frac{(\text{StdPr} - \text{SellPr}) \times \text{PC}}{\text{StdPr}}$$

QR is the quality rating.

QC is the quality concern.

BR is the brand rating.

BC is the brand concern.

StdPr is the standard price

NOTE: Each has a predefined standard price. It is for the internal calculations only and is not displayed.

SellPr is the selling price.

PC is the price concern.

Quality

To compete successfully in the marketplace, you need a solid understanding of how a product's quality is determined and how you can improve its quality.

In the game a product's quality rating ranges from 0 to 100. If you are in a highly competitive market, compare quality ratings of your products to those of the competitors frequently and react if their quality ratings rise.

The following sections explain how the quality of manufactured goods, crops, livestock products and raw materials is determined.

Manufactured Goods

The quality of manufactured goods depends of two factors:

- The quality of raw materials
- The production technology level of the factory

See Page 47 (Chapter 4, Manufacturing Unit)

Crops

Crop product quality is consistent among different farms. The quality does increase, however, as a farm accumulates experience. A farm with higher unit levels produces better-quality crop products

Livestock Products

Livestock product quality is consistent among different farms. The quality does increase, however, as a farm accumulates experience. A farm with higher unit levels produces better-quality livestock products.

Raw Materials

For raw materials such as timber, crude oil, coal, chemicals, or metals, the quality is determined by the quality of natural resource reserves.

Brand

A brand is a distinguishing name and/or symbol intended to identify and differentiate a seller's products from competitors' products. A well established brand is a valuable, intangible asset. For some products, a consumer may judge a product mainly by its brand.

A brand rating represents the overall value of a brand. This rating is the sum of the brand awareness rating and the brand loyalty rating. These two ratings are described in detail in the following sections.

Brand Awareness

Brand awareness measures consumers' knowledge that a particular brand exists. People will often buy a familiar brand because they feel more comfortable with it. They may assume that a product with a familiar brand is reliable, of reasonable quality, and that it is produced by a company with a reputation for having been in the marketplace a long time.

Brand Awareness Level and Rating

Brand awareness ranges from barely being recognized as a competitor in the marketplace to being recognized as the only one in the product class. The brand awareness rating, which has a range from 0 to 100, represents the two main dimensions of brand awareness: the percentage of the city population that is aware of the brand and the average awareness level of the people.

Increasing Brand Awareness

Brand awareness increases when:

- The brand has been advertised extensively.
- The products using the brand have been sold for a long time.
- The products using the brand are widely distributed.
- The customer base is large.

Brand Loyalty

Brand loyalty measures the attachment that a customer has to a brand. If a customer continues to purchase a brand even in the face of competitors with a superior quality and/or lower price, then there must be a substantial value placed in the brand itself.

Brand Loyalty Level and Rating

In the game, a brand loyalty rating (with a range of 0 to 100) represents the two main dimensions of brand loyalty:

- The percentage of the people who are loyal to the brand
- The average loyalty level of the people

Brand Loyalty Factors

Brand loyalty is based mainly on the following factors:

Brand Awareness

Brand loyalty cannot exist without the prior purchase and use of a product. The brand must first generate sufficient awareness for the consumers purchase and use the product. The higher the awareness, the more people will try the product, and the faster the rate at which the loyalty can increase.

Product Quality

If a customer is satisfied after using the product, brand loyalty increases. Conversely, a bad experience with a product will lead to a decrease in brand loyalty or sometimes even negative brand loyalty (the customer will avoid buying the same brand in the future). In addition, customers will only be loyal to a brand if products of the brand have consistent quality.

Brand Scope

If a brand covers a variety of products, the corporation is not perceived as a dedicated provider of a single category of products. Consumers may doubt the devotion of the corporation to that product and their loyalty to the brand may thus be reduced. See “Brand Strategy” below for details on brand scope.

Brand Strategy

Your corporation can select one of three brand strategies in Capitalism II:

- **Corporate Brand.** A corporation uses a single umbrella brand for all its products.
- **Range Brand.** A single brand covers a range of products within the same product class.
- **Unique Brand.** Each product has a unique brand.

We strongly recommend that you decide the brand strategy of your corporation at the beginning of the game. Switching brand strategy after brands have been established not only leads to a loss of the hard-earned brand rating, but is also gives your competitors an opportunity to steal customers during the difficult task of reestablishing your brands.

To set the brand strategy of your corporation, first open the Corporate Detail Report and then select the Brand section. A set of buttons appears in the upper left section of the report:

- Corporate Brand
- Range Brand
- Unique Brand

The selected button represents your corporation's brand strategy.

To switch to a new brand strategy, click the button representing that strategy. You are warned that your products will be designated with the new brand strategy and that the brand ratings of all you products will be set to zero as a result. To proceed, answer Yes and the brand replacement starts immediately.

Corporate Brand

If the corporation uses a single umbrella brand for all its products, the corporation does not start from scratch in building up awareness of the brand identity for a new product. The investment required in the line accordingly reduced.

Although this strategy offers major savings in the time and resources required to build a new brand from scratch and improves the cost effectiveness of resources spent on supporting the brand family, it is not without drawbacks.

Its major drawback is that the corporation is not perceived as a dedicated provider of a single category of product. Consumers may doubt the devotion of the corporation to the product and their loyalty to the brand may thus be reduced.

In addition, when a corporation extends its product lines to others markets, it becomes more difficult for the corporation to maintain the quality and consistency of its products. Failure to maintain quality and consistency results in damage to the brand as a whole. The risk increases if the corporation extends its product lines across markets of different product classes.

Range Brand

Under the strategy, products in the same product class are labeled with a single range brand.

The range brand strategy enjoys the same benefits and drawbacks as the corporate brand strategy, but to a lesser extent. These effects are limited because the number of products a range brand covers is smaller. The range brand strategy is preferable to the corporate brand strategy if the quality of your corporation's products varies substantially across different product classes. On the other hand, if you are confident that the quality of your products can be maintained, then the corporate brand strategy may be a better choice.

Unique Brand

Under this strategy, each product has a unique brand.

The unique brand strategy's most obvious advantage is that you can simply forget the risk of brand interference across different product lines. Brand loyalty, which has been built up over the years, will not be damaged by inappropriate quality control in other product lines.

The downside of this strategy, however, is that each individual product needs separate advertising to establish and support its brand. Under this strategy advertising can become a major expense for the corporation. The corporation can lose a price advantage to a corporation that successfully pursues a corporate or range brand strategy.

Advertising

Advertising is the most important element of brand development. With a handsome advertising budget, a firm can raise the public awareness of a brand easily and rapidly. A clear understanding of advertising is the first step toward becoming a successful brand manager.

The sections below first introduce some basic media concepts and then discuss the effect of advertising frequency, reach, duration, and the relationships between them. Finally, a section illustrates the relationship between advertising and product quality.

The following deals with the theoretical side of advertising. To know exactly how your products can be advertised, see "Advertising Unit" on page 31.

Media Concepts

Before you start advertising your products, you should be familiar with the following media concepts, as they will be used extensively in areas relating to advertising:

- **Media Vehicle.** The specific program, publication, or promotional piece used to carry an advertising message.
- **Coverage.** A measure of the potential audience that might receive an advertising message through a media vehicle.
- **Reach.** The number of different audience members exposed at least once to a media vehicle in a given period.

- **Rating Points.** A measurement used to determine the portion of potential audiences receiving messages from a specific media vehicle. One rating point is the equivalent of one percent of all of the potential audiences receiving messages from a specific media vehicles. It can be calculated by dividing the reach by the coverage.

- **Cost Per Advertisement.** The cost to place an advertisement on the medium.

- **Cost Per Thousand.** The cost of exposing 1,000 members of a target audience to an advertising message.

- **Daily Frequency.** An indication of the number of times a target audience is exposed to an advertisement in a day.

- **Monthly Frequency.** An indication of the number of times a target audience of exposed to an advertisement a month.

- **Frequency, Reach and Duration.** Three main attributes of an advertising campaign. These terms are explained below:

- **Frequency.** This indicates the number of times an average audience is exposed to an advertisement in a specified time period.

The higher the frequency, the greater the chance the audience will be aware of the advertisement. It is difficult to determine which frequency is the most effective, but generally a person must be exposed to an advertisement at least three or four times before the person can recognize the brand. A frequency that is too low cannot deliver an advertising message clearly and may not be able to improve the brand awareness at all.

- **Reach.** The number of people exposed to a specific advertisement at least once during a particular time period.

Each media vehicle (newspaper and television in the game) has a different rating and reach. Media vehicles with a higher reach will charge a higher cost for delivering an advertisement.

To make the advertising campaign successful, enough people must be exposed to the advertisement. If a single media vehicle cannot provide you with satisfactory reach, you should advertise your products on more than one media vehicle to have a higher combined reach.

- **Duration.** This refers to the duration of the advertising campaign. You determine the duration of an advertising campaign.

You can spread the advertising budget evenly over a year or concentrate spending on months when the demand is high.

Since your advertising budget may not allow you to have high frequency, high reach, and long duration at the same time, you must allocate your resources to each of them wisely. For example, if high-frequency exposure is necessary to bring your product into public awareness, then you might need to sacrifice reach and duration for frequency.

Advertising & Product Quality

Advertising can be an effective way of building up brand equity, but only when used adequately and wisely.

Spending large amounts of money advertising a low-quality product is a waste of money. Customers will only develop brand loyalty toward a high-quality product. If your product is inferior to those of its competitors, you can save money budgeted for advertising and concentrate on cost reduction instead. This lets you position your company as a cost leader and target the market segment of price-sensitive customers.

The following illustrates the effect of advertising under four different case scenarios:

- **Low quality and little advertising.** Low demand at first due to low brand awareness.

Demand remains low or even drops because the buyers are not satisfied with the low quality, which results in low or even negative loyalty toward the brand.

Long term: Brand awareness is low; brand loyalty is low or even negative; demand is low.

- **Low quality and heavy advertising.** High demand at first due to high brand awareness raised by heavy advertising.

Demand decreases gradually because buyers are not satisfied with the low quality, resulting in low or even negative loyalty toward the brand.

Long term: Brand awareness is high; brand loyalty is low or even negative; demand is low to moderate (high awareness can always attract some new buyers).

- **High quality and little advertising.** Low demand at first due to low brand awareness.

Demand increases gradually because buyers are satisfied with the high quality and develop loyalty toward the brand.

Long term: brand awareness is low to moderate (large sales and a loyal customer base help increase awareness); brand loyalty is moderate to high; demand is moderate.

- **High quality and heavy advertising.** High demand at first due to high brand awareness raised by heavy advertising.

Demand continues to increase because buyers are satisfied with the high quality and develop loyalty towards the brand.

Long term: Brand awareness is high; brand loyalty is high; demand is high.

Local Competitors

There are local competitors in each city. Although their firms are not shown in the game map, they compete directly with the corporations. Sometimes, they are even the major competing forces in the market.

Information about local competitors is shown briefly in the Product Summary Report (page 74) and the Product Detail Report (page 76). The white portion of the pie charts in the reports represents the combined market share of all local competitors in the city. The reports also show the average price, quality rating, brand rating, and overall rating of the goods that are sold by the local competitors in the city. For more details on information in these two reports, see Chapter 5.

Chapter 8: Personnel Management

You can hire a Chief Operating Officer (COO) for your corporation and let that person take care of the day-to-day management of your firms. This frees you from tedious micro-management and lets you concentrate on corporate-level planning.

You can also hire a Chief Marketing Officer (CMO) and a Chief Technical Officer (CTO). The marketing expertise of your CMO will influence any advertising units you have in your firms by increasing their efficiency. Your CTO will control all of your R&D firms, determining research and improving the efficiency of R&D projects with their expertise.

To hire a COO, you must first build a Chief Operating Officer Office in your headquarters. For details, please see the section on headquarters in Chapter 4: Firms, Units and Buildings. Similarly, you must build a Chief Marketing Officer Office in order to hire a CMO and a Chief Technical Officer Office to hire a CTO.

Hiring an Officer

To hire a candidate, you may click the Look for Candidates button on the Officer's Office in Headquarters. Subsequently, you will be taken to the Person Report in the Information Center. Alternatively, you can access Person Report directly and select the Career page.



Now select the person you want to hire and choose from which of the three roles you would like the candidate to take: Chief Operating Officer, Chief Marketing Officer or Chief Technical Officer. When you have selected the role, the candidate will propose a salary that you may decline or accept. If you agree to the proposed sum the candidate will be immediately available to your corporation.

Factors That Affect the Expected Salary

The following factors affect the expected salary:

The person's expertise. The more expertise the person has, the higher the requested salary.

- **The person's salary preference.** Each person has different salary expectations. This preference is not, however, shown on the report; you have to figure it out yourself by experience.
- **Profitability of the corporation.** A person expects a higher salary offer from a highly profitable company.
- **The person's attitude toward you.** Someone who doesn't like you will work for you only if you offer a higher-than-average salary.

Attitude

A person's attitude toward you improves if the person works for your corporation.

It gets worse if:

- You reject a request for a raise.
- You terminate the person's employment.
- The person resigns.

Salary Raise Request

If your COO thinks he or she deserves a raise, you see a request for a raise. If you turn down the request, two outcomes are possible.

- Stay in the corporation.

If the COO is a good friend (attitude toward you is very good), the COO may stay in the corporation, but will feel discontented and attitude toward you will get worse.

- Decide to resign.

If the COO is not particularly fond of you, he or she may decide to resign.

How often you see raise requests depends on the individual's personality. Some people ask for a raise without a second thought as soon as their current salary is below their expected level. Some people ask for a salary raise only if their current salary is far below their expected level.

Resignation

Your COO may ask to resign to start his or her own corporation or for personal reasons. You can try offering a higher salary or just let the COO go. The chance of a resignation is lower if your COO has a good attitude toward you.

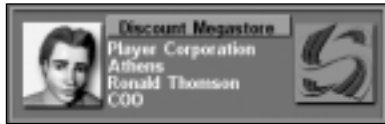
Layoff

To terminate the employment of your COO, go to the career section of the person report and click the Terminate Employment button.

You pay your COO one month's salary and severance if you terminate employment. Severance is calculated by multiplying the weekly salary by the number of years the person has been working for your corporation.

Laying a person off may cause resentment toward you. However, if the layoff is because of the corporation's financial difficulties, the degree of resentment is minimized.

Delegating Firms to Your Chief Operating Officer



You can let your COO manage your firms. Display the detail screen of one of your firms and you see a portrait at the top-left corner of the screen, which shows the current manager of the firm.

Click on the portrait and you will see a window where you can click the *Let him manage this firm* button to let your COO manage this firm. Now the portrait located at the top-left corner of the screen has changed to your COO's.



If you want your COO to manage all of your firms for you, click on his portrait. You will see a window where you can click the *Let him manage all of my firms* button to do just that.



Later, if you wish to manage the firm yourself, click the COO's portrait and select *I will manage this firm myself* from the window.

COO's Responsibilities

The COO is responsible for day-to-day management of your firms but does not have the authority to set up or close down functional units.

- **Department Store.** The COO sets the products' selling price, arranges advertising, seeks better suppliers, stops the purchase if the cost is higher than the selling price, and conducts training if necessary.
- **Farm.** The COO sets the products' selling price, and conducts training if necessary.
- **Factory.** The COO sets the products' selling price, seeks new suppliers if the current supply of raw materials stops, and conducts advertising and training if necessary.
- **R&D Center.** The COO decides which products to research and develop and how much training should be conducted.
- **Mine, Oil Well, and Logging Camp.** The COO sets the raw materials' selling price and conducts training if necessary.

Your COO's personality affects how much advertising and training are conducted and the preference for buying goods from sister firms owned by your corporation (see *Personality* on page 93).

Management Policies

You can set a number of policies for your COO to follow for managing your firms. To set the policies, go to the *Career* section of the *Person Report*. The following are their descriptions.

Corporation	Red Aspen	
Job Title	Chief Operating Officer	
Years of Service	0	
Attitude Towards You	Neutral, 0%	<input type="button" value="Terminate Employment"/>
Annual Salary	\$4,568,000	
MANAGEMENT POLICIES		
Pricing Policy	<input checked="" type="radio"/> Normal <input type="radio"/> Aggressive <input type="radio"/> Very Aggressive	
Change Internal Sale	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Look for Better Supplies	<input checked="" type="radio"/> No <input type="radio"/> From Own Firms Only <input type="radio"/> From Any Firms	
Look for Better Products to Sell in Retail Stores	<input checked="" type="radio"/> Yes <input type="radio"/> No	

Adjust the parameters your Chief Operating Officer adheres to in the Career section of the Person Report.

Pricing Policy

If you let your COO manage your firms, product prices are set in response to the market change. You can tell your COO to follow the pricing policy you prefer. It can be one of the following:

- **Normal Pricing Policy.** The COO adjusts product prices so that your overall product ratings are close to the competition.
- **Aggressive Pricing Policy.** The COO adjusts product prices so that your overall product ratings are about 10 points higher than the competition.
- **Very Aggressive Pricing Policy.** The COO adjusts product prices so that your overall product ratings are about 20 points higher than the competition.

However, if demand for a product is higher than supply, the COO will increase the price regardless of which pricing policy is in effect. When the bottleneck is in the supply, decreasing price only generates more demand but not sales.

Set the pricing policy to aggressive or very aggressive only if you want to trigger a price war with your competitors. A price war greatly reduces the profit margins of all parties involved. It only pays off if your competitors are driven out of the market and you take advantage of the monopoly.

Change Internal Sale.

If this option is set to Yes, your COO will change the internal sale setting of your products for you.

Look for Better Supplies.

This option determines whether your COO will look for better supplies for your purchasing units. However, the product types of supplies will not be changed. If this option is set to From Own Firms Only, your COO will try to locate better supplies from your own firms only. If this option is set to From Any Firms, your COO will ignore who operates the supplying firms and pick the best available supplier.

Look for Better Products to Sell in Retail Stores.

If this option is set to Yes, your COO will attempt to change the types of products being sold in your retail stores to maximize your profits.

Expertise

Choose a name from the list of people and select Expertise from the menu list on the right to see the *Expertise* page.

Field of Expertise	Rating (0-100)
Retailing	90
Farming	0
Manufacturing	0
Research and Development	0
Raw Material Production	0
Marketing	90
Training	0

The computer players have expertise in the following fields:

- **Retailing**
- **Farming**
- **Manufacturing**
- **Research and Development**
- **Raw Materials Production.** If a person has expertise in these fields, the firms that the person manages have higher unit levels. For every 20 expertise-level points, the units advance one level. For example, if a person's manufacturing expertise level is 40, all functional units created in factories the person manages start at level 3.

- **Advertising.** If a person has an advertising expertise, advertising conducted by the person generates higher brand awareness. The result doubles when a person's advertising expertise level is 100.
- **Training.** If a person has training expertise, the staff learn faster in training conducted by the person. The efficiency doubles when a person's training expertise level is 100.

Delegating Firms to a COO with Expertise

If you assign your COO to manage a firm and your COO has expertise managing the firm, all the functional unit levels in the firm increase. For example, if you have a manufacturing unit of level 3, delegating the factory to a COO whose manufacturing expertise is 40 points increases the level of the manufacturing unit to 5 (3+2).

If the COO quits managing your firms, the functional units drop back to their original level. However, any advancement gained from training is not affected.

Delegating R&D Centers

If you assign a person with R&D expertise to manage your R&D centers, new projects started by the COO will have higher expected technology advancement. However, the R&D projects that have already started do not benefit from the COO's expertise.

NOTE: If the COO quits managing the R&D centers, the expected technology advancement drops to the original level.

Personality

Each computer player has a personality. The information is displayed in the Personality section of the Person Report.



Character

The most important aspect of personality is the main character attribute. The main character attribute can be any of the following:

- **Conservative.** The principal mindset of a conservative person is safety. All expansion must be carefully planned and is carried out only when the existing business is profitable and the corporation's cash reserve is high enough to make the person feel comfortable.
- **Moderate.** A moderate person is always open to opportunities, but takes action only when confident. A moderate person still pays considerable attention to the corporation's profitability and cash reserve before any expansion, but not as much as a conservative person.
- **Aggressive.** Expect a corporation controlled by an aggressive CEO to expand relentlessly, because it does not care too much about the profitability and cash reserve of the current business. An aggressive person does not fear competition and will not hesitate to compete with you whenever the market is attractive.
- **Very Aggressive.** The person with very aggressive character always wants to extend into all kinds of businesses. This person is interested in every sort of business because the ultimate goal is to control every market in the world.

Concerns

Apart from the main character attribute, a person's concern about other subjects can also give you clues about management style. The person's attitude toward a particular subject can range from 0 to 100. The areas where a person has concerns are listed below.

Some of them are meaningful only if the person is a CEO or COO and do not apply to independent investors. The people to whom these concerns apply are shown in parentheses.

Investing in Research and Development (CEO & COO)

A high degree of concern here indicates someone who would invest heavily in R&D. A low number means that the person is conservative toward R&D investment.

Investing in Training and New Equipment (CEO & COO)

Whether the person believes in expending resources for the training of staff and the procurement of new equipment.

Frequency of Upgrading Production Facilities (CEO & COO)

A high degree of concern in this area indicates that the person would upgrade the production facilities as soon as a better production technology becomes available. A low number means that the person would upgrade production facilities only if the production technology has improved significantly.

Upgrading production facilities can improve product quality, but it causes a downgrade of functional units. Therefore, there is never an optimal rate of upgrading production facilities.

Spending on Advertising (CEO & COO)

Whether the person would spend aggressively on advertising.

Paying Dividend (CEO, COO, & Independent Investor)

A high degree of concern here indicates that the person would pay generous dividends to the shareholders.

Investing in Stock (CEO)

A high number in this attribute indicates that the person enjoys investing in stocks and the person may enjoy speculating in stocks even more.

Corporation Takeover and Merger (CEO)

A high number in this area warns that your corporation would be at risk if the person is interested in your corporation.

Strengthening Corporation Ownership (CEO)

A high degree of concern here means that the person is highly conscious of the need to strengthen ownership.

Endure Loss for Avoiding Layoff (CEO)

A high degree of concern reflects that the person is a good employer and will be reluctant to close down firms or lay off employees.

Purchasing Goods from Own Firms (CEO & COO)

A high degree of concern indicates that the person's corporation would always buy goods from its own firms, even if the goods offered by other suppliers were better.

Advanced Management Technique

Follow the steps below:

1. Add the layout plans of your existing firms to the Layout Plan Library. Make sure that every functional unit is working before adding the plan to the library.
2. Set up a new firm, and apply a layout plan from the library to the firm.
3. Delegate the firm to your COO. Your COO will take care of the firm. Using this technique, you can minimize the amount of operation-level management you need to do. It is especially useful for factories, because your COO purchases all raw materials needed and you don't have to look for suppliers yourself.

Appendix A: Product Ranges of Retail Stores

The following table displays the types of retail stores in which each product type may be sold when the game setting *Retail Store Type* is set to "Many."

Product	Sell in
Air Conditioner	Department Store, Discount Megastore & Hardware Store
Backpack	Department Store, Discount Megastore & Sports Store
Bath Lotion	Department Store, Discount Megastore, Supermarket, Convenience Store, Cosmetic Store & Drug Store
Bed	Department Store, Discount Megastore & Furniture Store
Bottled Milk	Discount Megastore, Supermarket & Convenience Store
Bread	Discount Megastore, Supermarket & Convenience Store
Cakes	Discount Megastore, Supermarket & Convenience Store
Camera	Department Store, Discount Megastore, Supermarket, Convenience Store & Hardware Store
Camera Film	Department Store, Discount Megastore, Supermarket, Convenience Store & Hardware Store
Canned Corn	Discount Megastore, Supermarket & Convenience Store
Canned Soup	Discount Megastore, Supermarket & Convenience Store
Car	Automobile Outet
Chair	Department Store, Discount Megastore & Furniture Store
Chewing Gum	Discount Megastore, Supermarket & Convenience Store

Product	Sell in
Chocolate Bar	Discount Megastore, Supermarket & Convenience Store
Cigarettes	Discount Megastore, Supermarket & Convenience Store
Cigars	Discount Megastore, Supermarket & Convenience Store
Cola	Discount Megastore, Supermarket & Convenience Store
Cold Tablets	Discount Megastore, Supermarket, Convenience Store & Drug Store
Cookies	Discount Megastore, Supermarket & Convenience Store
Corn Flakes	Discount Megastore, Supermarket & Convenience Store
Cough Syrup	Discount Megastore, Supermarket, Convenience Store & Drug Store
DVD Player	Department Store, Discount Megastore & Hardware Store
Desktop Computer	Department Store, Discount Megastore, Hardware Store & Computer Store
Detergent	Discount Megastore & Supermarket
Eggs	Supermarket & Convenience Store
Elegant Watch	Department Store & Jewelry + Watch Store
Eye Shadow	Department Store, Discount Megastore, Cosmetic Store & Drug Store
Frozen Beef	Supermarket & Convenience Store
Frozen Chicken	Supermarket & Convenience Store
Frozen Lamb	Supermarket & Convenience Store
Frozen Pork	Supermarket & Convenience Store
Fruit Snacks	Discount Megastore, Supermarket & Convenience Store

Product	Sell in
Gold Ring	Department Store & Jewelry + Watch Store
Golf Clubs	Department Store, Discount Megastore & Sports Store
Grape Juice	Discount Megastore, Supermarket & Convenience Store
Hair Color	Department Store, Discount Megastore, Cosmetic Store & Drug Store
Handheld Game Device	Department Store, Discount Megastore & Toy Store
Headache Pills	Discount Megastore, Supermarket, Convenience Store & Drug Store
Hi-Fi	Department Store, Discount Megastore & Hardware Store
Ice Cream	Discount Megastore, Supermarket & Convenience Store
In-line Skates	Department Store, Discount Megastore & Sports Store
Jeans	Department Store, Discount Megastore & Apparel Store
Leather Bag	Department Store, Discount Megastore & Leather Store
Leather Belt	Department Store, Discount Megastore & Leather Store
Leather Briefcase	Department Store, Discount Megastore & Leather Store
Leather Jacket	Department Store, Discount Megastore & Apparel Store
Leather Wallet	Department Store, Discount Megastore & Leather Store
Lipstick	Department Store, Discount Megastore, Cosmetic Store & Drug Store
Microwave	Department Store, Discount Megastore & Hardware Store

Product	Sell in
Mobile Phone	Department Store, Discount Megastore & Hardware Store
Motorcycle	Automobile Outlet
Notebook Computer	Department Store, Discount Megastore, Hardware Store & Computer Store
Palm Computer	Department Store, Discount Megastore, Hardware Store & Computer Store
Perfume	Department Store, Discount Megastore, Cosmetic Store & Drug Store
Printer	Department Store, Discount Megastore, Hardware Store & Computer Store
Sandals	Department Store, Discount Megastore & Footwear Store
Shampoo	Department Store, Discount Megastore, Supermarket, Convenience Store, Cosmetic Store & Drug Store
Shoes	Department Store, Discount Megastore & Footwear Store
Silver Necklace	Department Store & Jewelry + Watch Store
Soap	Department Store, Discount Megastore, Supermarket, Convenience Store, Cosmetic Store & Drug Store
Socks	Department Store, Discount Megastore & Footwear Store
Sofa	Department Store, Discount Megastore & Furniture Store
Sport Shoes	Department Store, Discount Megastore & Footwear Store
Sports Watch	Department Store & Jewelry + Watch Store
Sweater	Department Store, Discount Megastore & Apparel Store

Appendix B: Manufacturer's Guide

Product	Sell in
Television	Department Store, Discount Megastore & Hardware Store
Toilet Cleaner	Discount Megastore & Supermarket
Toothpaste	Discount Megastore & supermarket
Toy Doll	Department Store, Discount Megastore & Toy Store
Toy Racing Car	Department Store, Discount Megastore & Toy Store
Video Camera	Department Store, Discount Megastore & Hardware Store
Video Game Console	Department Store, Discount Megastore & Toy Store
Video Recorder	Department Store, Discount Megastore & Hardware Store
Wine	Department Store, Supermarket & Convenience Store
Yogurt	Department Store, Supermarket & Convenience Store

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Apparel	Leather Jacket 6 units	Leather 5 lbs Q: 45%	Textiles 1 lb Q: 5%		50%
Apparel	Jean 2 pairs	Dyestuff 1 lb Q: 10%	Textiles 2 lbs Q: 40%		50%
Apparel	Sweater 3 units	Wool 3 lbs Q: 50%	Dyestuff 1 lb Q: 10%		40%
Automobile	Car 1 unit	Car body 1 unit Q: 30%	Engine 1 unit Q: 30%	Wheel & Tire 4 units Q: 10%	30%
Automobile	Motor cycle 1 unit	Engine 1 unit Q: 30%	Steel 50 lbs Q: 10%	Wheel & Tire 2 units Q: 10%	50%
Bath Supplies	Body Lotion 10 units	Chemical Materials 1 lb Q: 20%	Coconut Oil 1 unit Q: 15%	Plastic 1 lb Q: 5%	60%
Bath Supplies	Shampoo 15 units	Chemical Materials 3 lbs Q: 20%	Plastic 1 lb Q: 5%		75%
Bath Supplies	Soap 8 units	Citric Acid 1 lb Q: 15%	Coconut Oil 1 unit Q: 20%	Paper 1 lb Q: 5%	60%
Beverage	Bottled Milk 8 units	Milk 2 quarts Q: 65%	Glass 1 lb Q: 5%		30%
Beverage	Cola 17 cans	Sugar 5 lbs Q: 10%	Aluminum 1 lb Q: 10%		80%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Beverage	Grape Juice 20 units	Grapes 10 lbs Q: 40%	Citric Acid 1 lb Q: 10%	Glass 1 lb Q: 5%	45%
Beverage	Wine 6 units	Grape 5 lbs Q: 50%	Glass 1 lb Q: 5%		45%
Chemical Products	Detergent 10 units	Chemical Materials 3 lbs Q: 20%	Citric Acid 1 lb Q: 10%	Plastic 1 lb Q: 5%	65%
Chemical Products	Toothpaste 20 units	Chemical Materials 3 lbs Q: 25%	Plastic 1 lb Q: 5%		70%
Chemical Products	Toilet Cleaner 6 units	Chemical Materials 3 lbs Q: 25%	Plastic 1 lb Q: 5%		70%
Computer	Desktop Computer 1 unit	CPU 1 unit Q: 40%	Electronic Components 1 lb Q: 15%	Steel 1 lb Q: 5%	40%
Computer	Notebook Computer 2 units	CPU 2 units Q: 40%	Electronic Components 1 lb Q: 15%		40%
Computer	PDA 3 units	CPU 3 units Q: 40%	Electronic Components 1 lb Q: 15%	Plastic 1 lb Q: 5%	40%
Computer	Printer 1 unit	Electronic Components 1 lb Q: 20%	Plastic 2 lbs Q: 5%		75%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Cosmetics	Eye Shadow 10 units	Chemical Materials 1 lb Q: 25%	Plastic 1 lb Q: 5%		70%
Cosmetics	Hair Color 10 units	Dyestuff 2 lbs Q: 25%	Plastic 1 lb Q: 5%	Wheat Germ Oil 1 unit Q: 10%	60%
Cosmetics	Lipstick 40 units	Dyestuff 3 lbs Q: 20%	Plastic 1 lb Q: 5%	Wheat Germ Oil 1 unit Q: 10%	65%
Cosmetics	Perfume 8 bottles	Chemical Materials 1 lb Q: 30%	Glass 1 lb Q: 5%		65%
Dessert	Cakes 4 units	Egg 1 dozen Q: 20%	Cocoa 1 lb Q: 20%	Flour 3 lbs Q: 20%	40%
Dessert	Ice-cream 20 units	Milk 2 quarts Q: 20%	Strawberry 2 lbs Q: 20%	Sugar 1 lb Q: 10%	50%
Dessert	Yogurt 8 units	Milk 2 quarts Q: 20%	Strawberry 1 lb Q: 20%	Citric Acid 1 lb Q: 10%	50%
Drugs	Cold Tablets 20 units	Chemical Materials 1 lb Q: 15%	Plastic 1 lb Q: 2%		83%
Drugs	Cough Syrup 20 units	Chemical Materials 2 lbs Q: 15%	Plastic 1 lb Q: 2%		83%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Drugs	Headache Pills 20 units	Chemical Materials 2 lbs Q: 15%	Plastic 1 lb Q: 2%		83%
Electronic Products	Air Conditioner 1 unit	Electronic Components 1 lb Q: 5%	Steel 6 lbs Q: 5%		90%
Electronic Products	Hi-fi 1 unit	Aluminum 2 lbs Q: 5%	Electronic Components 2 lbs Q: 15%	Steel 3 lbs Q: 5%	75%
Electronic Products	Microwave Oven 1 unit	Electronic Components 1 lb Q: 15%	Glass 1 lb Q: 5%	Plastic 1 lb Q: 5%	75%
Electronic Products	Television 1 unit	Electronic Components 3 lbs Q: 20%	Glass 2 lbs Q: 5%	Plastic 1 lb Q: 5%	70%
Electronic Products	DVD Player 2 units	Aluminum 2 lbs Q: 5%	Electronic Components 1 lb Q: 15%		80%
Electronic Products	Mobile Phone 5 units	Electronic Components 1 lb Q: 15%	Plastic 1 lb Q: 5%		80%
Electronic Products	Video Camera 3 units	Electronic Components 1 lb Q: 20%	Glass 1 lb Q: 5%	Plastic 1 lb Q: 5%	70%
Electronic Products	Video Recorder 1 unit	Electronic Components 1 lb Q: 15%	Glass 1 lb Q: 5%	Steel 1 lb Q: 5%	75%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Food	Bread 10 loaves	Flour 9 lbs Q: 40%			60%
Food	Canned Corn 2 units	Corn 1 lb Q: 60%			40%
Food	Canned Soup 2 units	Frozen Chicken 1 lb Q: 60%			40%
Food	Corn Flakes 9 units	Corn 2 lbs Q: 50%	Sugar 1 lb Q: 10%		40%
Footwear	Sandals 1 pair	Rubber 1 lb Q: 30%			70%
Footwear	Shoes 4 pairs	Leather 5 lbs Q: 45%	Textiles 1 lb Q: 5%		50%
Footwear	Socks 20 pairs	Wool 1 lb Q: 25%			75%
Footwear	Sport Shoes 2 pairs	Cotton 1 lb Q: 10%	Rubber 1 lb Q: 15%	Polyester 2 lbs Q: 20%	55%
Furniture	Bed 1 unit	Timber 80 lbs Q: 50%			50%
Furniture	Chair 2 units	Timber 20 lbs Q: 40%	Textiles 1 lb Q: 15%		45%
Furniture	Sofa 1 unit	Leather 5 lbs Q: 30%	Cotton 5 lbs Q: 15%	Timber 30 lbs Q: 15%	40%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Jewelry	Silver Necklace 1 unit	Silver 3 oz Q: 70%			30%
Jewelry	Gold Ring 1 unit	Gold 1 oz Q: 70%			30%
Leather Goods	Leather Bag 18 units	Leather 5 units Q: 45%	Textiles 1 lb Q: 5%		50%
Leather Goods	Leather Belt 35 units	Leather 6 lbs Q: 45%	Steel 1 lb Q: 5%		50%
Leather Goods	Leather Briefcase 4 units	Leather 5 lbs Q: 45%	Textiles 1 lb Q: 10%		45%
Leather Goods	Leather Wallet 3 units	Leather 1 lb Q: 50%			50%
Photography	Camera 2 units	Electronic Components 2 lbs Q: 15%	Glass 1 lb Q: 5%	Plastic 1 lb Q: 5%	75%
Photography	Camera Film 30 units	Chemical Materials 5 lbs Q: 10%	Silver 1 oz Q: 5%	Plastic 2 lbs Q: 5%	80%
Semi-Products	Citric Acid 1 lb	Lemon 10 lbs Q: 30%			70%
Semi-Products	Car Body 1 unit	Glass 30 lbs Q: 15%	Plastic 30 lbs Q: 15%	Steel 300 lbs Q: 20%	50%
Semi-Products	Coconut Oil 1 unit	Coconut 5 lbs Q: 20%			80%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Semi-Products	Corn Syrup 1 lb	Corn 4 lbs Q: 60%			40%
Semi-Products	CPU 50 units	Silicon 1 lb Q: 5%			95%
Semi-Products	Dyestuff 10 lbs	Oil 1 barrel Q: 30%	Timber 30 lbs Q: 20%		50%
Semi-Products	Electronic Components 3 lbs	Chemical Materials 1 lb Q: 10%	Silicon 1 lb Q: 10%	Steel 1 lb Q: 10%	70%
Semi-Products	Engine 1 unit	Steel 100 lbs Q: 20%			80%
Semi-Products	Flour 1 lb	Wheat 2 lbs Q: 70%			30%
Semi-Products	Glass 1 lb	Silica 2 lbs Q: 40%			60%
Semi-Products	Linen 1 lb	Flax Fiber 2 lbs Q: 50%			50%
Semi-Products	Paper 1 lb	Timber 1 lb Q: 50%			50%
Semi-Products	Plastic 30 lbs	Oil 1 barrel Q: 35%			65%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Semi-Products	Polyester 6 lbs	Chemical Materials 4 lbs Q: 35%	Oil 2 barrels Q: 15%		50%
Semi-Products	Silicon 2 lbs	Silica 3 lbs Q: 40%			60%
Semi-Products	Steel 2 lbs	Coal 3 lbs Q: 20%	Iron Ore 1 lb Q: 30%		50%
Semi-Products	Textiles 1 lb	Cotton 2 lbs Q: 50%			50%
Semi-Products	Wheat Germ Oil 1 lb	Wheat 10 lbs Q: 30%			70%
Semi-Products	Wheel & Tire 1 unit	Rubber 20 lbs Q: 25%	Steel 20 lbs Q: 25%		50%
Snacks	Chocolate Bar 10 units	Milk 1 quart Q: 20%	Cocoa 1 lb Q: 30%		50%
Snacks	Cookies 10 units	Sugar 1 lb Q: 10%	Flour 9 lbs Q: 20%		70%
Snacks	Fruit Snacks 5 units	Strawberry 1 lb Q: 50%			50%
Snacks	Chewing Gum 20 units	Sugar 1 lb Q: 10%	Corn Syrup 1 lb Q: 15%		75%
Sport Equipment	Backpack 15 units	Linen 1 lb Q: 10%	Polyester 4 lbs Q: 30%		60%

Product Class	Product	Input 1	Input 2	Input 3	Production Technology
Sport Equipment	Golf Club 1 unit	Timber 1 lb Q: 15%	Steel 1 lb Q: 20%		65%
Sport Equipment	In-line Skates 2 pairs	Leather 2 lbs Q: 20%	Rubber 1 lb Q: 10%	Steel 1 lb Q: 10%	60%
Tobacco Products	Cigarettes 50 packs	Tobacco 1 lb Q: 40%	Paper 1 lb Q: 10%		50%
Tobacco Products	Cigars 1 box	Tobacco 2 lbs Q: 50%	Paper 1 lb Q: 10%		40%
Toy & Video Game	Hand-held Game Device 10 units	Electronic Components 2 lbs Q: 15%	Glass 1 lb Q: 2%	Plastic 2 lbs Q: 3%	80%
Toy & Video Game	Toy Racing Car 8 units	Electronic Components 1 lb Q: 20%	Plastic 7 lbs Q: 10%		70%
Toy & Video Game	Toy Doll 10 units	Cotton 2 lbs Q: 10%	Dyestuff 1 lb Q: 10%	Textiles 2 lbs Q: 20%	60%
Toy & Video Game	Video Game Console 3 units	Electronic Components 1 lb Q: 25%	Plastic 2 lbs Q: 5%		70%
Watch	Elegant Watch 6 units	Glass 1 lb Q: 10%	Steek 1 lb Q: 10%		80%
Watch	Sports Watch 30 units	Electronic Components 1 lb Q: 15%	Glass 1 lb Q: 5%	Plastic 4 lbs Q: 5%	75%

Appendix C: Shortcut Keys

O - Option menu

S - Save game menu

L - Load game menu

N - Set newspaper display options

F - Firm summary report

C - Corporation summary report

P - Product summary report

G - Goal report

H - Headquarter

I - Information center

0 - 5 game speed

E - Event tracker

Space - Activate/deactivate tool bar

M - Activate/deactivate mini-map window

W - Activate/deactivate world map window

F1 - Manufacturer's guide

F2 - Farmer's guide

F3 - Manager's guide

F4 - Stock market

F5 - Financial action

, - Farthest zoom

. - Medium zoom

/ - Closest zoom

[- Previous city

] - Next city

PgUp - Previous firm

PgDn - Next firm

Arrow keys - Scroll the city map

ESC - Exit the current screen