

Rolling Stock

Learning the Game

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Abstract

This is an introduction to the game *Rolling Stock*. It is written in a casual and easy-to-understand way, with a lot of examples, figures, and helpful explanations. Read this first to learn the game.

Later, when you need to refresh your knowledge of the rules or you want a precise answer to rules questions, refer to the canonical rules (the four-page leaflet delivered with the game). Those rules are supposed to be the single and complete “source of truth”. Thus, all the examples and explanations in this introduction are meant as a help to understand the rules but not to add or change any rules.

Once you have understood the basics of the game, you will probably enjoy reading the *Player’s Guide*, featuring practical playing tips, strategic hints, variants, background information, and more.

1 Overview

Rolling Stock is a card game for three to five players. The players take the role of investors. They buy private companies, which they may later turn into corporations or sell to already existing corporations. In addition, they can trade shares of those corporations. The player with the most shares in a corporation becomes its president and controls its actions. Corporations may own any number of those formerly private companies (that were sold to them by players or were used as the seed to found a new corporation). Companies owned by corporations are called *subsidiary companies*. Corporations can even buy subsidiary companies from each other.

Note the nomenclature here: Corporations could also be called “public companies”. However, to avoid confusions, we want to keep the meaning of the word “company” narrow and will not use it for corporations (but for the subsidiary companies they own).

Subsidiary companies owned by the same corporation may create synergies with each other, increasing the income of the corporation. These synergies can be seen as a quite abstract representation of transportation networks. (*Rolling Stock* has no board and therefore lacks a more concrete representation of transportation networks, as you might know it from similarly themed games.)

As more and more newer companies are brought into the game, older companies become less profitable and have to be written off eventually. Corporations have to struggle to stand the test of time.

In the end, the richest player wins the game, measured by the added values of privately owned companies, shares of corporations, and cash.

Thematically, the game starts in the 1830s in Prussia. The private companies initially available are early Prus-

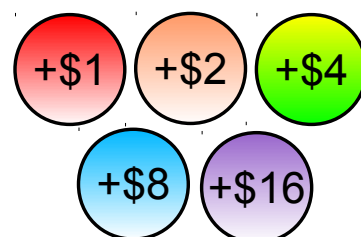
sian railroad companies. Throughout the game, the scope widens. First to Germany, then to Europe. The vast majority of the companies are still railroad companies. At this point, the game ends if you play the game type called *training game*. (As the name suggests, this game type is meant to get familiar with the game, its rules and basic strategies. It is not really a complete game yet.)

Once you have played one or more *training games*, you are ready to play the “real” game. You can choose between the *short game* and the *full game*. Both types of games feature an additional set of companies representing container ports and airports. The *full game* adds a set of space-faring companies on top of everything else.

2 Components

The game contains three booklets: One is titled *Learning the Game* (you are reading it right now), one is the *Player’s Guide* (which you will certainly enjoy reading once you know the basics of the game), and finally there are the actual rules (written in a very concise and formal way – comes in handy if you are looking for precise answers to your most delicate rules questions, but definitely not suitable for learning the rules).

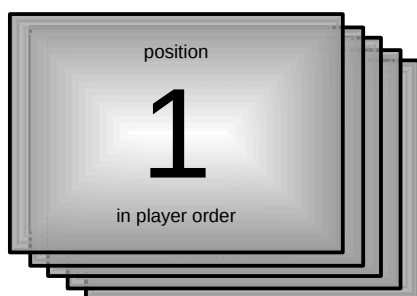
There are five *turn summaries*, describing the ten phases of a game turn. Hand out one to each player.



Furthermore, you will find a pile of *play money* and 60 round double-sided *synergy markers* (see figure above). The markers and the money are meant to be unlimited. In the unlikely case that you run out of these components, find other means of tracking money and synergies. (You might anyway want to replace the provided paper money with poker chips. Poker chips are usually superior to paper money but they are too heavy and costly to include in the game.)

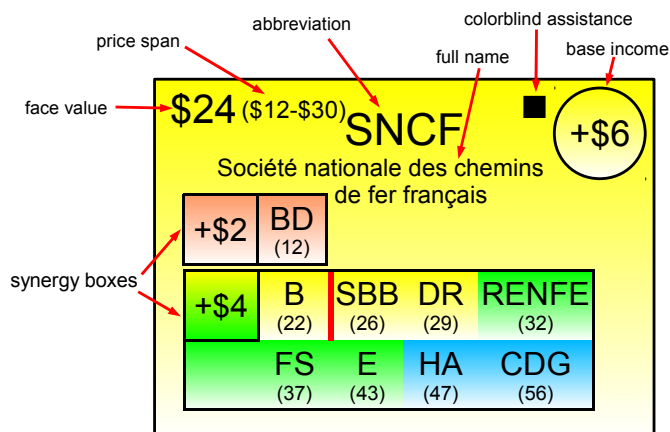
Rolling Stock is a card game, so there are obviously cards, 196 of them. Let's look at them in detail.

2.1 Player order cards



There are five *player order cards*. They are used to randomly determine the initial player order and later track the player order throughout the game.

2.2 Company cards



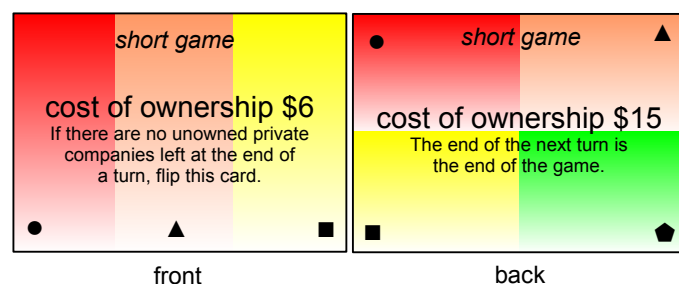
The 45 *company cards* are the core of the game. They come in six colors. To assist color-blind players, each color has a geometric shape assigned to it: Red (●), orange (▲), yellow (■), green (◇), blue (○), purple (*).

Each company has a unique face value, printed in the upper left corner. The face value is used when calculating the book value of a corporation (see section 5.9) and when calculating the wealth of a player in the end of the game (see section 8). It is also the minimum bid in auctions (see section 4.3), and since it is unique, it can be used to identify the company (like a serial number).

The numbers printed in parentheses to the right of the face value define the price span the company can be sold for to corporations. In the upper right corner, you'll find a circle with a "+\$" amount. This is the income of the company. In the middle between the face value and the income, you can see the name of the company and its abbreviation. Name, abbreviation, and face value are each unique. So you can refer to the *Société nationale des chemins de fer français* as "the Société nationale des chemins de fer français" or "the SNCF" or "the 24". Whatever you like most. The colorful boxes on the company card tell you something about the possible synergies with other companies. They will be explained later (section 5.8).

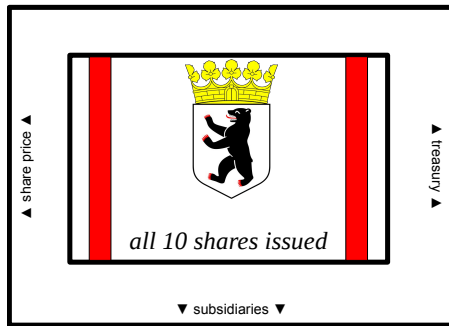
The back of each company card shows a *cost of ownership* (starting from no cost at all up to \$6). The cost of ownership printed on the back of a company card has nothing to do with the cost of ownership of the company described on the face of the same card. When you set up the game, you will build a deck of face-down company cards. The back of the top-most card in that deck determines the current cost of ownership applying to all companies whose color matches one of the colors in the central rectangle on the back of the card. A more detailed explanation of the cost of ownership will follow later (section 6.8).

2.3 Game end cards



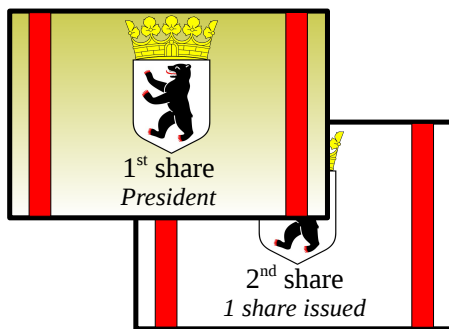
The colorful cards that have a cost of ownership on both sides are the *game end cards*. There are three of them, one for each possible type of game: the *training game*, the *short game*, and the *full game*. Only one game end card is used in any given game, depending on the type of the game. The game end card is used as the bottom-most card of the company card deck.

2.4 Symbol cards



There are 10 *symbol cards*. Each features the symbol and color of a corporation in a central box, together with the text “all 10 shares issued”. A symbol card is the central component of the corresponding corporation. Its shares (see below) are put into the central box. The money it owns is placed right of the symbol card, and its share price card (see below) to the left. In a horizontal row below the symbol card, you line up all the companies the corporation owns as *subsidiaries* (which might be as few as one).

2.5 Share cards



There are 100 colored share cards, 10 for each corporation. The shares are represented as smaller cards, featuring the symbol and color of the respective corporation. The shares are numbered, with the 1st share marked as the *president's* share.

2.6 Share price cards

← \$20		share price		\$24 →	
IPO		\$22		max payout per share \$7	
shares	2	3	4	5	6
← \$18	\$0-\$39	\$0-\$59	\$0-\$79	\$0-\$99	\$0-\$119
← \$20	\$40-\$43	\$60-\$65	\$80-\$87	\$100-\$109	\$120-\$131
\$24 →	\$44-\$47	\$66-\$71	\$88-\$95	\$110-\$119	\$132-\$143
\$26 →	\$48-\$50	\$72-\$80	\$96-\$99	\$120-\$130	\$144-\$150

front

← \$20		share price		\$24 →	
IPO		\$22		max payout per share \$7	
shares	7	8	9	10	
← \$18	\$0-\$139	\$0-\$159	\$0-\$179	\$0-\$199	
← \$20	\$140-\$153	\$160-\$175	\$180-\$197	\$200-\$219	
\$24 →	\$154-\$167	\$176-\$191	\$198-\$215	\$220-\$239	
\$26 →	\$168-\$180	\$192-\$200	\$216-\$220	\$240-\$250	

back

There are 32 white share price cards. These cards are used to mark the current price of each share of a corporation. They show the share price in the center. Left of the share

price, some share price cards feature an IPO box. Right of the share price, you'll find another box showing you the maximum payout per share. The upper left and upper right corner show the next lower or next higher share price, respectively. The table in the lower half is used to adjust share prices, as explained later. Front and back of each share price card are basically the same, just another part of the table is shown (as it is too large to fit on one side of the card).

2.7 Foreign investor card



Finally there is the *foreign investor*. The card contains quite a lot of text, explaining the actions of the foreign investor, a kind of dummy player. The card is also used to arrange the assets of the foreign investor, similar to the symbol card of corporations. His money goes to the right of the card, his companies in a horizontal row below it.

The rules will often prompt you to “turn a card vertically” or to “turn a card back horizontally”. The standard (and “default”) orientation of a card is called “horizontal” (i.e. if the rules don't state anything else, a card is oriented horizontally). If you turn the card by 90°, its orientation is called “vertical”. Vertical orientation marks a special state of a card and is mentioned explicitly in the rules wherever it applies.

3 Setting up the training game

Your first game will be a so-called *training game*. It's a bit too short to count as a real game, but it is well suited to learn the rules and basic strategies. Almost all players will make severe strategic mistakes in their first game. It is very frustrating to play through one of the longer game types if you have unintentionally ruined your position early in the game. With fast players, a training game will only take about 90 minutes. Beginners, however, usually play slower than that.

Set up the training game following these steps:

1. Each player should have a turn summary handy throughout the game.
2. Place the money in a central position on the table, easily reachable for everybody. This central area is the *bank*. Initially, it contains all the money in the game, but later, it will also contain shares.

3. Give each player \$30 from the bank.
 4. In a three-player game, the player order cards for position 4 and 5 are not used. In a four-player game, the player order card for position 5 is not used. Return the unused player order cards to the box. Shuffle the remaining player order cards and deal one random card to each player. The players reveal their cards, which define the initial player order. You don't need to change seating order as the player order will change often throughout the game.
 5. Set the ten symbol cards aside, separately. On top of each symbol card, into the central box, place the 10 shares of the corresponding corporation. Sort the shares, with the 10th share at the bottom and the 1st share on top.
 6. In another area of the table, lay out the 32 share price cards in a long, sorted row, starting with \$0 and ending with \$100. Most tables will not be long enough for this row. Feel free to break the row, e. g. into four rows of eight cards each. But keep in mind that it is effectively still one long row.
 7. Pick one player who will be in charge of executing the actions of the foreign investor. (There are no decisions involved. That player only has to make sure that those actions are executed according to the rules and not forgotten.) Place the foreign investor card in reach of that player. Place \$4 (from the bank) into the treasury of the foreign investor (i. e. to the right of the foreign investor card).
 8. Place the blue and purple companies and the game end cards for the short game and the full game back into the box. They are not used in the training game.
 9. In the following steps, you'll build the company deck. Start with the game end card (marked with *training* game). Place it on the table where it is easily visible for all players (somewhere next to the bank). Turn the face with the lower cost of ownership (\$3) up.
 10. Shuffle the green companies. Without looking at them, draw one more company than there are players (four in a three-player game, five in a four-player game, six in a five-player game). Place them face down on the game end card (i. e. with the cost-of-ownership side up). Return the remaining green companies to the box, again without looking at them.
 11. Now do exactly the same with the yellow companies: Shuffle them, draw one more than there are players, and place them face down on the company deck (i. e. on top of the green companies). Return the remaining yellow companies to the box.
 12. Repeat for the orange companies, but draw six companies in a four-player game and (all) eight companies in a five-player game. (In a three-player game, there are four orange companies, as usual.)
 13. Finally, do the same with the red companies, using the normal numbers again (one more company than players). You have now created a deck with the red companies on top, followed by the orange companies, followed by the yellow companies, followed by the green companies, followed by the game end card.
 14. From the deck, draw and reveal a number of company cards equal to the number of players. Place them next to the deck. These companies are now in the *offering*. They are all available for auctions in the first turn of the game.
- You are all set to start the first turn of the game.

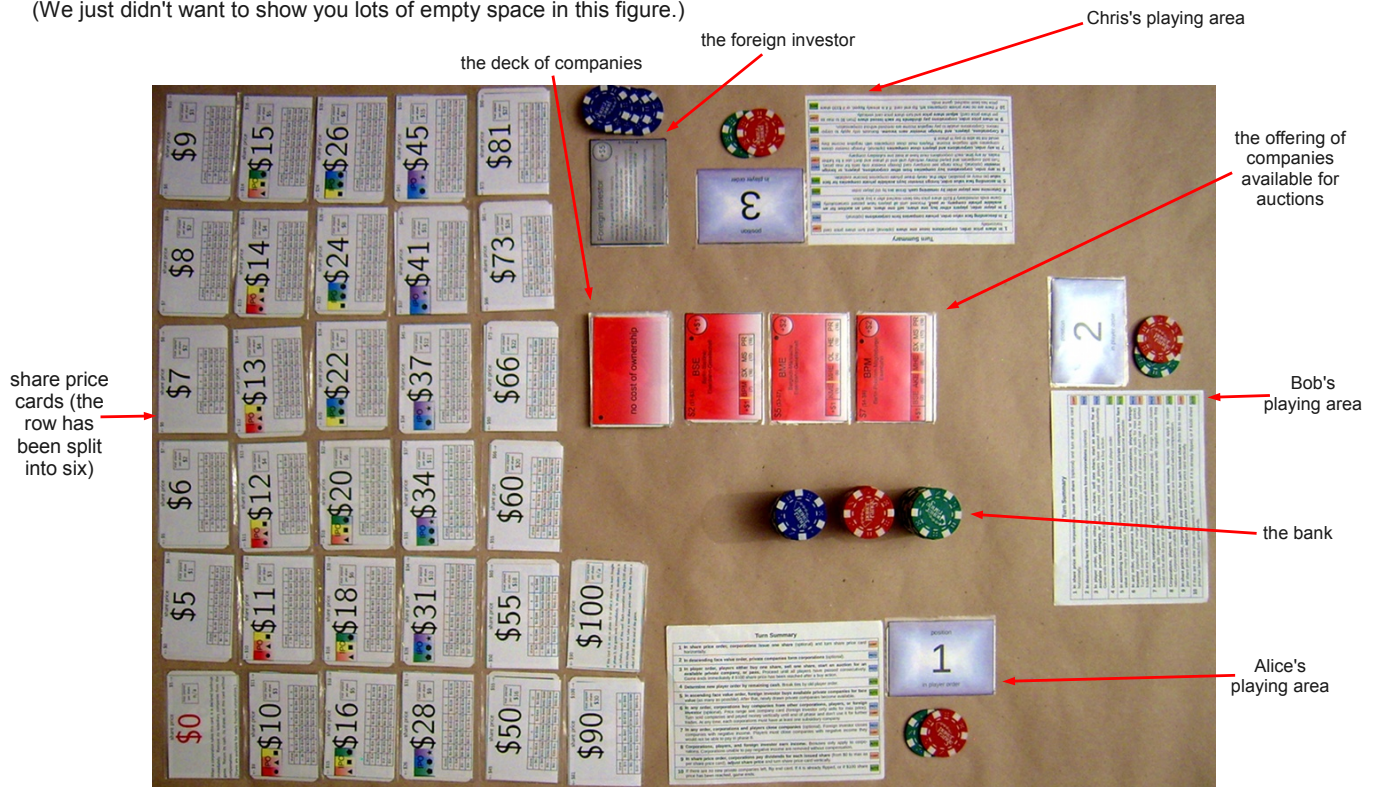
Example set-up for three players

Poker chips were used here instead of paper money.

The symbol cards and shares are set aside and not visible.

In practice, it is recommended to leave more space in the middle of the table.

(We just didn't want to show you lots of empty space in this figure.)



4 The first turn

Each turn runs through ten phases (although in some turns, nothing might happen in particular phases). Refer to the turn summary to get an overview. The right-most column of the turn summary indicates who makes decisions in a particular phase: *PRIV* means that the players act as private investors. *CORP* means that the players act as presidents of the corporations. (The president of a corporation is the player that currently holds the president's share of that corporation.) *AUTO* means that no decisions are required. The game "plays itself" in those phases.

4.1 Phase 1 – issue new shares

There are no corporations yet, so no shares can be issued. In turn 1, nothing happens in this phase.

4.2 Phase 2 – form corporations

There are no privately owned companies yet, so nobody can go public. In turn 1, nothing happens in this phase.

4.3 Phase 3 – auctions and share trading

In current player order, starting with position 1, each player performs exactly one action. However, the player order is cyclic, so after the player last in player order has taken their action, loop back to player 1, who will now take exactly one action again. Proceed with player 2, and so on. Repeat this cycle until you meet the end condition described below.

In turn 1, the only actions available are *pass* and *start an auction*. (The share trading part of this phase is still missing in turn 1.)

Pass is a very simple action: If you take that action, you (basically) do nothing. As a reminder that your last action was *pass*, you turn your player order card vertically. Passing does not prevent you from taking a different action next time you are up. If you take an action different from *pass*, but you have passed before, turn your player order card back horizontally.

If at any time during this phase, all player order cards are turned vertically, the phase immediately ends. In other words, the phase ends once all players have passed consecutively. Even if passing itself does not prevent you from taking another action next time you are up (see above), the phase might end before you have the opportunity to do so (which happens if everybody else passes, too).

Start an auction is the other possible action. If you take that action, you pick one of the companies available for auctions. You place a bid at least as high as the face value of that company. If you don't have enough money to do so, or if there is no company available for auctions, you cannot take this action. Once you have placed your bid, the player next to you in player order either raises the bid by at least \$1 or leaves the auction. Then the

next player does the same, and so on. Remember that the player order is cyclic, so after the last player in player order has raised the bid or left the auction, the player at position 1 is up to either raise the bid or leave the auction. This cycle continues until all players but one have left the auction. The remaining player pays their bid to the bank and places the company card in front of them. A player's bid must not exceed the money the player owns. Players that have left the auction are skipped for the remainder of that auction. They are not allowed to re-enter that same auction.

Once the auction is over, a new company card is drawn and placed face-up into the offering of companies. However, the newly drawn card is not available for auctions during the same phase it is drawn. Turn the company card vertically to mark it as unavailable. In the first few turns of the game, it is very common that at some point during this phase all the companies in the offering are not available for auctions so that players cannot start more auctions.

The player that takes the next action after the auction is the one next in player order after the player who *started the auction* (not after the player who won the auction).

Example of a complete auction: Alice, Bob, and Chris play a three-player game. The current player order is Alice: 1, Bob: 2, Chris: 3. Alice has \$20, Bob \$12, Chris \$9. The offering contains the MHE, the WT, and the MS. The WT has only been drawn this turn, so it is oriented vertically. Bob is up to pick an action. He wants to start an auction. However, the WT is not available for auctions, and the MS is too expensive (minimum bid is \$17 but Bob has only \$12). The only company Bob could pick is the MHE. He does so and decides to place an initial bid of \$9. \$8 would have been a legal bid, too, but Bob wanted to kick Chris out of the auction from the start. Chris is next in player order but has only \$9. So he cannot raise the bid and automatically leaves the auction. Next is Alice. She has enough money to raise the bid. She decides to raise the bid to \$11. Now it's back to Bob. He would still be able to raise the bid to \$12 but he thinks that \$12 for the MHE is a bit too much. Furthermore, if he leaves now, Alice has won the auction and has to pay the \$11 she has bid. After that, she won't have enough money to buy the MS, which she would have gotten for face value otherwise because no other player would have had enough money to over-bid her. So Bob leaves the auction, Alice pays \$11 and gets the MHE. A new company is drawn, the BD, which is placed into the offering, but turned vertically. The auction is over now, and the next player to take an action is Chris (because he is next in player order after Bob, who started the auction). Chris doesn't have enough money to start an auction. So he has to pass and turns his player order card vertically. In fact, the only company available for auctions is the MS, and none of the players has enough money left to bid for it, so all players have to pass, and the phase ends.

4.4 Phase 4 – determine new player order

Redistribute player order cards according to remaining cash on hand. The player with the most cash left gets position 1, and so on. Break ties using the old player order. (In practice, you should first check if there are any ties, break them according to the current distribution of player order cards, and only then start to redistribute the player order cards.)

Example (continuing the example above): After the end of phase 3, both Alice and Chris have \$9 left. Bob has \$12 left. So Bob will be on position 1 in the new player order. Alice and Chris tie for position 2. Since Alice was before Chris in the old player order (1 vs. 3), she gets position 2, and Chris keeps position 3.

4.5 Phase 5 – foreign investor

If there are any companies left that are available for auctions, the foreign investor tries to buy them for face value directly (no auction triggered), starting with the company with the lowest face value and then continuing in ascending face value order. If he has enough money for the company with the lowest face value, he pays it to the bank and adds the company to his assets. (Place the company below the foreign investor card. If he already owns companies, line them up in a horizontal row.) Then repeat with the company with the next lowest face value, and so on, until he no longer has enough money.

Whenever the foreign investor buys a company, draw a new one from the deck as if that company had been purchased in an auction.

Usually, it takes a few turns before the foreign investor manages to buy a company. In practice, it is very rare that he buys more than one company in one turn.

After the foreign investor is done, turn all companies in the offering horizontally, so that they are available for auctions in phase 3 of the next turn.

4.6 Phase 6 – corporations buy companies

As there are still no corporations in the game, nothing happens in this phase.

4.7 Phase 7 – close companies

In principle, you could close your freshly bought companies already, but it really wouldn't make any sense. So ignore this phase for now.

4.8 Phase 8 – collect income

The bank pays income to all players and to the foreign investor. Each player adds the income of all their companies and collects the result from the bank. (The income of each company is printed in the circle in the upper right corner of the company card.)

The foreign investor does the same, but always earns an additional +\$5 bonus, regardless of owning any companies (see the circle in the upper right corner of the foreign investor card). Add the foreign investor's income to his treasury to the right of the foreign investor card.

4.9 Phase 9 – pay dividends

Only corporations pay dividends. As you probably have guessed by now, there are no corporations yet, so nothing happens.

4.10 Phase 10 – end of game check

Only once we approach the end of the game, something will happen in this phase. Ignore it for now.

5 The second turn

Congratulations. You have finished your first turn. The second turn is going to become a bit more interesting. Some of the phases won't be ignored any longer, and others get more complex.

5.1 Phase 1 – issue new shares

We are nearly there, but at the moment, we still have no corporations in the game. So once again, nothing to see here.

5.2 Phase 2 – form corporations

Now that players actually own private companies, they can decide to go public with one or more of them, i. e. convert them into *corporations*. Only companies owned by players can be converted into corporations (but not companies owned by the foreign investor or by already existing corporations). In descending face value order, the owners of the eligible companies have to decide if they want to go public or not. If they do, the whole procedure is completed for that company before the owner of the next company decides.

Example: Alice owns the MS (face value \$17) and the KME (\$5). Bob owns the WT (\$11) and the BPM (\$7). Chris owns the BSE (\$2). The first company that may go public is the MS. Alice has to decide first, and cannot revise her decision later during the same phase. Once she has decided if the MS goes public (and if so, has performed the required procedure), Bob decides for the WT and then for the BPM. After that, Alice decides for the KME, and finally Chris decides for the BSE.

The conversion procedure is the following:

1. Pick one of the symbol cards that is currently not in use. Together with the pile of shares on top, place it a bit away from your personal assets (it's going to be a *public* company after all) but still in your reach. (In the unlikely case that there is no unused symbol

card available, your company cannot be converted. Sorry.)

2. Place the company that is being converted below the symbol card.
3. From the share price cards that are currently not in use, choose an eligible starting price for your corporation. The eligible share price cards are those that feature the color of the company being converted in their IPO box. Place the chosen share price card left of the symbol card. (That will leave an empty spot in the row of share price cards. Leave it alone, don't move the other share price cards to close the gap.) The share price cards determines the current value of each share of the corporation. In turn 2, all privately owned companies are red, so the allowed starting share prices are \$10, \$11, \$12, \$13, and \$14. However, in later turns, players will own differently colored companies, too, which changes the range of eligible starting share prices for those companies. (It is even possible, albeit highly unlikely, that all eligible share price cards are in use by other corporations. In that case, your company cannot be converted. Sorry.)
4. Now take the first share from the stack of shares (which is the golden president's share) and place it in front of you. That's now your share, which you got in exchange for the company you went public with.
5. As the share you have received has a higher share price than the face value of the company you went public with, you have to pay the difference from your private money into the treasury of the corporation. Place the money to the right of the share price card. (If you don't have enough money to pay the difference, the whole procedure is void and has to be undone. If possible, you can choose a lower share price so that you have enough money to pay the difference between share price and face value of your company. But if not, you cannot convert your company. Sorry once more.)
6. The whole point of going public is to get public investors. So next, you place the second share from the stack into the bank. In return, the bank pays the share price into the treasury of the corporation. (This step is mandatory. You cannot opt to not give a share to the bank.)



Example: You go public with the MHE (\$8 face value). As the symbol for your new corporation, you choose “the Bear”. As starting share price, you choose \$11. You have to pay \$3 into the treasury of your newly formed corporation. You receive the president’s share of the Bear in return. The bank receives the second Bear share and pays \$11 into the treasury of the corporation. Arrange all involved components as shown in the figure above. The Bear corporation consists of the \$11 share price card, the Bear symbol card with the eight remaining shares in the central box, the company card of the MHE, and \$14 cash in its treasury. (In the figure above, poker chips were used.)

5.3 Phase 3 – auctions and share trading

This phase works the same as in turn 1, but now we will add share trading to the mix. There are two more possible actions to choose from: *buy one share* and *sell one share*.

Only shares owned by the bank can be bought. (The pile of shares on top of the symbol cards cannot be touched in this phase.) If you choose the *buy one share* action, perform the following steps:

1. Take the desired share from the bank and place it in front of you.
2. Return the share price card of the corresponding corporation to its place in the row of share price card and replace it by the next higher available share price card. (Usually, that is the card with the share price marked in the upper right corner of the old share price card. However, if that share price card is in use, you will skip it. It is even possible that many share price cards in a row are used and the share price of the share you are currently buying jumps up a lot.)
3. Now pay the *new* share price to the bank. (If you don't have enough money to do so, the whole action is void. Undo everything, and try something else.)

Now re-read the last item in that list and think about the consequences. Like in real share trading, the displayed share price of a corporation is not the price you have to pay if you want to buy one of the shares. It is more like the “last known share price”. By buying a share, you are

already modifying the system, and you have to pay more than that “last known share price”.

After you have bought a share of a corporation you are not the president of, check if you now own more shares of that corporation than the current president. If that is the case, you have managed something like a hostile takeover. You are now the president of that corporation. Exchange the golden president’s share with any one of your shares of the same corporation. (Shares are basically all the same. The numbering only matters as long as they are still on the stack on top of the symbol card. The golden president’s share, however, is used as a marker for the current president. In all other regards, it’s a perfectly normal share.)

By the way: In turn 2, a hostile takeover as described above is technically impossible (because every existing corporation has only two shares issued, so you cannot own more than the current president). It’s still good to know about it for later.

If you choose the *sell one share* action, perform the following steps:

1. Choose one of your shares to sell and place it into the bank. (Only choose the golden president’s share if it is the last share you own of that corporation.)
2. Return the share price card of the corresponding corporation to its place in the row of share price cards and replace it by the next lower available share price card. (Usually, that is the card with the share price marked in the upper left corner of the old share price card. However, as before, you will skip missing share price cards.)
3. Now the bank pays you the *new* share price.

There is one important restriction in selling shares: After you have sold the share, there must be at least one other share of the same corporation owned by a player (which might be yourself). In other words, the bank can never own all issued shares of a corporation.

In turn 2, things are quite simple in this regard. Each corporation has only two shares issued, so if one is owned by the bank (which is the case just after going public), the other cannot be sold. Only after a player has bought a share from the bank, selling the other share of the same corporation becomes possible.

Similar to the situation when buying a share, the displayed share price is not the price you get paid. Like buying, selling a share modifies the system, so you get less money for a share than its “last known value”.

Another similarity is that a change of presidency might occur after the transaction: If you are the current president, and you have sold a share, you have to check if now another player (*not* the bank) owns more shares of that corporation than you. That player exchanges one of their shares of that corporation with the golden president’s share (which might still be owned by you, or it is owned by the bank if you have just sold it as your last share of that corporation). In the case where more than one player

is tied for the most shares, the player that is following you closer in player order becomes the president.

Example: The player order is Chris: 1, Alice: 2, Bob: 3. The “Eagle” corporation has currently three shares issued. (That cannot be the case in turn 2, only in later turns, you’ll see.) Alice is the president and owns the golden president’s share. Chris and Bob own each one of the other two shares. It’s Alice’s turn to take one action. She decides to sell one “Eagle” share, following the procedure above. After that, both, Chris and Bob own more shares each than Alice. As they are tied, the player order decides who becomes the new president. Alice is followed by Bob, and Bob is followed by Chris (remember, the player order is cyclic, the last player is followed by the first). So Bob is following Alice closer than Chris and becomes the new president. He takes the president’s share from the bank and places his own share into the bank in exchange. Now Bob own the president’s share, and Chris and the bank own one share each. Alice owns no “Eagle” share any longer.

5.4 Phase 4 – determine new player order

This phase works exactly the same as in turn 1.

5.5 Phase 5 – foreign investor

This phase works exactly the same as in turn 1.

5.6 Phase 6 – corporations buy companies

In this phase, corporations may buy companies. Only corporations may buy, but they might buy from anybody: players, the foreign investor, and even other corporations (but not from the offering of companies available for auctions – those are indeed only available for auctions in phase 3, and only players acquire them during auctions). In phase 6, players and the foreign investor only *sell* companies, never buy.

This is the first time where presidency of a corporation becomes relevant. The president of a corporation decides on behalf of the corporation. It might easily happen that both sides of a deal are actually controlled by the same player. If you (as a player) own a company and you are at the same time the president of a corporation, there is nothing wrong if you (as a player) agree with yourself (as the president of the corporation) that the corporation will buy your company for a price you agree on with yourself.

In every single transaction, exactly one company is bought. Buyer and seller have to agree on a price within the price span printed on the company card. (This price span is inclusive, e.g. the allowed prices for the KME (\$5 face value) are \$3, \$4, \$5, \$6, and \$7.) The buying corporation must be able to pay the price from its treasury. (You cannot pay with other corporations. It’s always one company for an allowed amount of cash.)

Any number of transactions might happen during the phase, in any desired order, even concurrently. Think of

a market place. Buyers and sellers find each other at will, by announcing their offers to whomever they want, negotiating into all directions. And once a buyer and a seller agree on a deal, they make it happen. The phase goes on until no transactions are happening any longer. There are some restrictions, though:

- Every \$ and every company may only be part of one single transaction in the whole phase. The money that has been paid is turned vertically, as well as the company that has been handed over, to mark those components as “in flight”. They cannot be part of another transaction in the same phase. Once the phase is over, you can turn them all horizontally again. They have “arrived” by then and can be used normally. (If you use poker chips, you’ll find it hard to recognize chips that have been “turned vertically”. Instead, place the chips used in a transaction on top of the stack of unissued shares.)
- At any time, each corporation must own at least one subsidiary company. You can never completely “empty” a corporation. This one company might very well be a company turned vertically, i.e. a corporation that owns only one subsidiary company in the beginning of the phase could first buy another company (which is thereby turned vertically) and then sell the company it originally owned. There is no hierarchy of subsidiary companies within a corporations. The company the corporations owned when it was formed has no special status within the corporation.

A special case is the foreign investor, as nobody controls him and his decisions. The foreign investor will happily sell any company he owns, but only for the maximum allowed price. The money he receives if he sells a company goes into his treasury and is available to be used in phase 5 of later turns. There might still be an ambiguous situation if more than one corporation want to buy the same company from the foreign investor. In that case, the corporation with the higher share price card has priority. In practice, whenever a corporation wants to buy a company from the foreign investor, it has to announce its intention. At that time, pause the game for a short while and ask each corporation with a higher share price if they want to intervene and buy that company immediately themselves. If more than one corporation wants to intervene, again the one with higher share price has priority. If no corporation intervenes, the announcing corporation *must* buy the company (i.e. no fake announcements allowed).

5.7 Phase 7 – close companies

As in turn 1, it rarely makes sense to close companies that early in the game. Keep ignoring this phase.

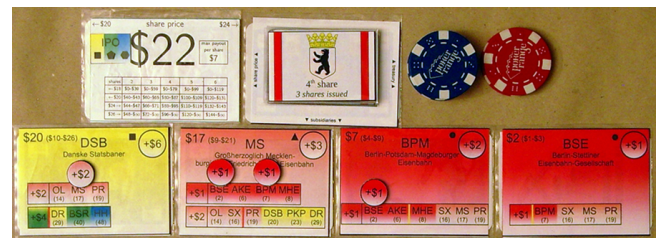
5.8 Phase 8 – collect income

For players and the foreign investor, this phase works exactly the same as in turn 1. The new thing is that corporations, too, collect income.

Their base income is calculated in the same way as for players and the foreign investor: Just add up all the income of the individual subsidiary companies of a corporation. However, corporations (and only corporations!) have the ability to generate bonus income from *synergies*:

A pair of companies that are subsidiaries of the same corporation and have each other’s abbreviation printed in one of their synergy boxes, generate the bonus income printed in the upper left corner of the synergy box. All pairs you can find within a corporation generate bonus income, but each pair generates the bonus only once. Use synergy markers to track the bonuses. For each pair, place a corresponding synergy marker on the company card of the company with the higher face value. Place it on top of the abbreviation of the other company. (There is a bold red or yellow line in each synergy box. You will see that the markers are only placed *in front of* that line, never behind. Never place markers behind the line (on the abbreviations of companies with higher face value) to avoid double-counting of bonuses.) To easily find all existing pairs, sort the company in descending face value order from left to right. Then start with the left-most company and check all the companies listed in its synergy boxes until you hit the bold line. No need to check behind the line. Then repeat the procedure with the second left-most company etc. You only ever have to look to the right. The companies left of the one you are checking have already been checked. So you have to look at fewer and fewer companies. The right-most company will never receive a synergy token.

The bank pays the total income of a corporation (base income plus synergy bonuses) into its treasury. For large corporations, it makes sense to track the income on a sheet of paper so that you don’t have to calculate the total income again each turn.



Example: The corporation in the figure above consists of the DSB (\$20 face value), the MS (\$17), the BPM (\$7), and the BSE (\$2). Its base income is $\$6 + \$3 + \$2 + \$1 = \$12$. The DSB pairs with the MS, yielding $+\$2$. The MS pairs with both, the BPM and the BSE, for $+\$1$ each. Finally, the BPM pairs with the BSE for $+\$1$. The synergies add up to $+\$5$ (note the synergy markers), so the total income is $\$12 + \$5 = \$17$.


You can see here how the synergies model a network: Both the BPM and the BSE historically started in Berlin. The MS is the state railroad of Mecklenburg, a German state north of and not far from Berlin. So it connects to the two Berliner railroad companies. The DSB, in turn, is the state railroad of Denmark, which is north of Germany, and relatively close to Mecklenburg. So MS and DSB can connect their networks for mutual benefit. The Bear corporation has developed into an international northern European railroad trust.

5.9 Phase 9 – pay dividends

Starting with the corporation with the highest share price card, and then continuing in descending share price order, each corporation may pay a dividend and then has to adjust its share price. Again, the president of a corporation decides on its behalf.

For each corporation, the president performs the following steps:

1. The top card of the stack of shares on your symbol card (or the symbol card itself if all stacks have been issued) tells you how many shares you have issued. You will have to pay dividends to each of those shares. So keep the number in mind.
2. On your share price card, you see the maximum possible dividend per share. Obviously, the corporation's treasury must have enough money to pay the dividends. If you have three shares issued and \$8 in the treasury, the maximum dividend per share is \$2, even if the share price card allows more. The minimum dividend is \$0. Pick a dividend in this range, and pay it from the corporation's treasury to the owner of each share (which might be yourself (this time as a player, not a president), another player, or the bank).
3. Now calculate the *book value* of the corporation: Add the face values of all companies owned by the corporation and the remaining cash in treasury.
4. Take your share price card and look at the table in the bottom half. Find the column that corresponds to the number of issued shares. (If you cannot find that column, flip the card. The column you are looking for will be on the back.) In that column, find the row that shows the \$ range that includes the book value you have calculated above. At the left end of that row, you will find your new share price and a little arrow. Return your old share price card to its spot in the row of share price cards and take your new share price card from the row. If your new share price card is currently in use by another corporation, find the next available share price card in the direction of the little arrow.
5. Turn your new share price card vertically (to mark that you have gone through this whole procedure).

← \$20		share price		\$24 →	
		\$22		max payout per share \$7	
shares	2	3	4	5	6
← \$18	\$0–\$39	\$0–\$59	\$0–\$79	\$0–\$99	\$0–\$119
← \$20	\$40–\$43	\$60–\$65	\$80–\$87	\$100–\$109	\$120–\$131
\$24 →	\$44–\$47	\$66–\$71	\$88–\$95	\$110–\$119	\$132–\$143
\$26 →	\$48–\$∞	\$72–\$∞	\$96–\$∞	\$120–\$∞	\$144–\$∞

Example: Imagine the same corporation as in the previous example (section 5.8). It has three shares issued, a current share price of \$22, and after paying dividends, it has \$16 left in treasury. Its book value is therefore \$20 (for the DSB) + \$17 (for the MS) + \$7 (for the BPM) + \$2 (for the BSE) + \$16 (cash) = \$62. Cross-reference as shown in the figure above. The new share price is \$20. If the \$20 share price card is not available, the next lower available share price card must be taken. (If the corporation had \$4 more cash, its book value would be \$66, just enough to go up to \$24. In that case, if the \$24 share price card were not available, it would go up even more, to the next higher available share price.)

5.10 Phase 10 – end of game check

We are still not close enough to the end of the game to make anything happen in this phase. Keep ignoring it.

6 The remaining turns

From the third turn on, all the features of the game are in full swing.

6.1 Phase 1 – issue new shares

Finally, corporations have the opportunity to issue new shares. After going public, this is the only phase where the stack of shares on the symbol card is touched and more shares enter the market.

Again in decreasing share price order (starting with the corporation with the highest share price card), the president of each corporation decides if the corporation issues one share or no share. (A corporation cannot issue more than one share in this phase.) In any case, the share price card is turned horizontally to mark that the corporation already had the opportunity to issue a share.

Issuing a share works very similar to selling a share. Perform the following steps for the corporation that issues a share:

1. Place the top-most share from the pile of unissued shares on the corporation's symbol card into the bank. (If there are no shares left, i.e. all 10 shares have already been issued, you cannot issue more shares. Sorry.)

2. Return the corporation's share price card to its place in the row of share price cards and replace it by the next lower available share price card. (Usually, that is the card with the share price marked in the upper left corner of the old share price card. However, as before, you will skip missing share price cards.)
3. Now the bank pays the *new* share price into the corporation's treasury.

Later in the game, it is possible that the share price card the corporation has to take is the \$0 one. In that case, the corporation is declared bankrupt and removed from the game. Follow the instructions on the \$0 share price card. Note that shares are "recycled", i.e. they may later be used to form new corporations. However, the "recycled" shares have nothing to do with the old bankrupt corporation. The bankrupt corporation is gone for good.

6.2 Phase 2 – form corporations

In general, this phase works the same as in turn 2. However, with the more valuable companies that have entered the game by now, you will sooner or later go public with a company whose face value matches or even exceeds the share price. In case the share price matches the face value, you simply don't have to pay anything into the corporation's treasury. The share you get has precisely the value of the company you have given up, so you are all set. But what to do if the share price is lower than the face value of the company going public? Very simple: Take more shares than one. Start with the president's share, and then continue to take shares until the total value of taken shares is matching or exceeding the face value of the company. Don't take more shares than you need to accomplish that. After that, pay the difference between total share value and face value of the company into the treasury of the corporation as usual. In this case, the number of shares to put into the bank is increased, too. Put as many shares into the bank as you have taken for yourself. Of course, the bank pays correspondingly more money into the corporation's treasury. You always end up with half of the issued shares in your possession and the other half in the bank.

Example 1: You go public with the BD (face value \$12). You choose a share price of \$12. You receive one share (the president's share) and pay nothing. The bank gets another share and pays \$12 into the treasury of the new corporation. The corporation ends up with two shares issued and \$12 in treasury.

Example 2: You go public with the BD (face value \$12). You choose a share price of \$11. You take the president's share, but its value is not sufficient to match the face value of the BD. So you take another share. Now you have two shares with a total value of \$22. You pay \$10 from your cash into the treasury of the new corporation. The bank gets two shares, too, and pays \$22 into the treasury. The corporation ends up with four shares issued and \$32 in treasury.

Example 3: You go public with the LE (face value \$90). You choose a share price of \$45 (a share price that is only allowed for blue and purple companies, but fortunately the LE is a purple company). You take two shares. Their value matches the face value of the LE, so you don't have to pay anything. The bank gets two shares, too, and pays \$90. The corporation ends up with four shares issued and \$90 in treasury.

Example 4: You go public with the LE (face value \$90). You choose a share price of \$28 (the lowest possible share price for purple companies). You take four shares with a total value of \$112. (Three shares have a total value of \$84, which would not have been enough to match or exceed the face value of the LE.) You pay \$22 from your cash into the treasury of the new corporation ($\$90 + \$22 = \$112$). The bank gets four shares, too, and pays \$112 into the treasury. The corporation ends up with eight shares issued and \$134 in treasury.

6.3 Phase 3 – auctions and share trading

Nothing really changes here compared to previous turns. However, we have to deal with a few special cases:

- After selling a share, the new share price might be \$0. In that case, the same procedure is triggered as described in section 6.1.
- After buying a share, the new share price might be \$100. In that case, the game ends after the buy action has been completed (i.e. you still have to pay the \$100 for the share you have just bought, but after that, the game is over). Read on in section 8 to learn how to determine the winner.
- Eventually, the deck of companies will run out. The last card in the deck is the game end card. It is never drawn and just stays where it is. If you cannot draw a company any longer after an auction, just skip that step. The offering will contain one less company whenever that happens.
- Eventually, there will be no company left in the offering. From that point on, the action *start an auction* cannot be chosen any longer.

6.4 Phase 4 – determine new player order

This phase works exactly the same as in previous turns.

6.5 Phase 5 – foreign investor

This phase works exactly the same as in previous turns.

6.6 Phase 6 – corporations buy companies

This phase works exactly the same as in turn 2.

6.7 Phase 7 – close companies

As you will see in the next section, later in the game, a *cost of ownership* will apply to certain companies. You might find yourself (or your corporation) in a situation where you want to get rid of one or more companies. In this phase, you can remove any number of your privately owned companies from the game. Simply return the company card to the box. Essentially, you can do the same for the corporations you control. However, a corporation has to retain at least one subsidiary company at any time.

If your total income from your privately owned companies in the following phase 8 (see there) will be negative and you don't have enough money to pay for it, you *must* close enough companies in this phase to be able to pay for your losses (or get rid of the losses altogether). In other words: As a player, you cannot drive yourself into bankruptcy.

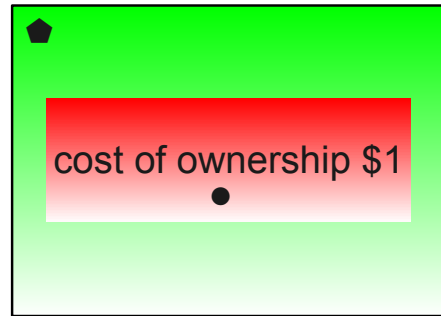
As in phase 6, the players act in no particular order. They simply close companies as they see fit, and once nobody wishes to close a company any longer, the phase ends.

The foreign investor automatically closes any companies with a negative income (to be vetted separately for each company).

6.8 Phase 8 – collect income

The income calculation works the same as before, but at some point in the game, you will have to deduct a *cost of ownership*. Refer to the back of the top-most card of the deck of (not yet drawn) companies. Starting with the green cards, it will show a central rectangle with a cost of ownership. Each company matching any of the colors in the rectangle suffers the cost of ownership printed on the card, i.e. its income is reduced, possibly becoming negative. Each player and each corporation first add up the income of all their companies, and only then they receive or pay the total income (if it is positive or negative, respectively). A player will always be able to pay their negative income (because they were required to close companies to make sure of that, see section 6.7). However, a corporation might not be able to pay its negative income. In that case, treat it the same as if it has just reached share price \$0 (see section 6.1).

Once all company cards have been drawn from the deck, the game end card is visible. With regard to cost of ownership, it is treated the same as the central rectangle on the company cards. (In the training game, you will only see the red rectangle on the back of the green company cards. The green companies are directly followed by the game end card. However, in the short and full game you will play later, you will see blue company cards with a red-and-orange rectangle on their back, and purple company cards with a red/orange/yellow rectangle on their back.)



Example: Look at the same corporation as used in the example in section 5.8. We calculated an income of \$17. That was without cost of ownership yet. If the top face-down card of the dock is a green one (see figure above), each red company has a cost of ownership of \$1. Our corporation would earn \$1 less per red company it owns. So it would earn \$2 less, its income would be \$15.



Once all companies have been drawn, the front-side of the game ending card is visible (see figure above). From now on, each orange and each red company has a cost of ownership of \$3. Our corporation would earn $3 \times \$3 = \9 less than the unmodified income. Its total income would be meager \$8 now.



In the last turn of the game (see section 6.10 below), the game end card will be flipped, and the cost of ownership will not only be much higher, but even affect yellow companies. (Luckily, it will only last one turn.) Our now pretty much obsolete corporation (if it still existed) would earn \$8 less for each company it owns (green companies would not be affected, but our corporation doesn't own any). \$17 unmodified income minus \$32 cost of ownership yields a hefty loss of \$15, which the corporation has to pay from its treasury. If there is not enough left, it goes bankrupt. (But of course, it could have closed all but one company in phase 7. Not good for the book value, but perhaps a

healthy consolidation. If it had closed all companies except the DSB, its losses would have been only \$2 (\$6 base income minus \$8 cost of ownership).

On the yellow and green company cards, you'll find some synergies with blue companies. Blue companies are not part of the training game, so ignore them for now.

6.9 Phase 9 – pay dividends

Once more, nothing really changes here compared to previous turns, but eventually, you might run into one of the following special cases:

- After adjusting the share price, the new share price might be \$0. In that case, the same procedure is triggered as described in section 6.1. (Note that paying dividends happens first. It's perfectly legal to pay a dividend only to drop to \$0 and go bankrupt right after that.)
- After adjusting the share price, the new share price might be \$100. In that case, the game does *not* end immediately. The phase continues, and only in phase 10, the game will be declared over. Should it happen that other corporations reach \$100, too, those companies don't take a new share price card. They only return their old one. The shares of a corporation without a share price card have a share price of \$100.

6.10 Phase 10 – end of game check

Eventually, something will happen in this phase.

First you have to check if the \$100 share price card is held by a company. If so, the game ends immediately. Read on in the next section to learn how to determine the winner.

If the \$100 share price card is not in use, check if there are still companies available for auctions in the offering. If not, flip the game end card (which will increase the cost of ownership). Once you reach phase 10 again, the game ends. (In other words: If at the start of phase 10, the game end card is already flipped, the game ends in the same way as if the \$100 share price card is in use.) The next section tells you how to determine the winner.

While the game end card is flipped (i.e. during the last turn of the game), the game might still end in phase 3 as described in section 6.3.

7 How the game ends

As described above, there are three ways the game may end:

- If a corporation takes the \$100 share price card during a *buy one share* action in phase 3, the game ends immediately after that action is completed.
- If the \$100 share price card is in use during phase 10, the game ends.
- If phase 10 starts with the game end card already flipped, the game ends.

8 Who has won?

For the final ranking of players, add the value of everything each player owns:

- Their cash.
- The face value of each private company they own.
- The current share price of each share they own.

For the final player ranking, it is irrelevant how much cash and which companies the corporations own.

If there is a tie, break it by player order (lower number in player order wins over higher number).

9 The short game and the full game

Once you have played the training game once or twice, you are ready for the “real” game types. No rules are changed, you just use a different game end card (each of the three game end card is marked with the game type it is used in – note that in the short and full game, even green companies will suffer cost of ownership in the later parts of the game), and you add one or two additional tiers of companies.

The *short game* adds the blue companies (airports, container ports, and an airline). As usual, select one more company than players, randomly and secretly, and add them to the deck, between the green companies and the game end card (which is now the game end card marked *short game*).

The *full game* adds not only the blue companies, but also the purple companies (space-faring companies – we got all the way from the 19th century to the future). They go into the deck between the blue companies and the game end card (which is now the game end card marked *full game*).

10 Overview of companies

To keep things short, only the abbreviated form of the company name is used here, followed by the face value, the allowed price span for selling the company, the base income, and the synergies. Each synergistic company is listed with its abbreviation followed by its face value in parentheses.

As an homage to the 18xx series of railroad games, games from that series that feature one or more of the companies represented in *Rolling Stock* are mentioned here.

10.1 Red companies

The red companies are early Prussian railroad companies from the first half of the 19th century. The same six companies are represented as *Vorpreußen* in Michael Meier-Bachl's *1835* (with slightly different names, though). Some of the companies can also be found in other games: The MHE in Klaus Kiermeier's *1873 Harzbahn*, the BPM and the BSE in David Hecht's *18EU*, the BME and KME in Wolfram Janich's *18Rhl – Rhineland*, and the AKE in Wolfram Janich's *1842: Schleswig Holstein*.

All synergies are +\$1.

BME	\$1	(\$1–\$2)	+\$1	KME(5)	BD(12) HE(15) PR(19)
BSE	\$2	(\$1–\$3)	+\$1	BPM(7)	SX(16) MS(17) PR(19)
KME	\$5	(\$3–\$7)	+\$2	BME(1) MHE(8)	OL(14) HE(15) PR(19)
AKE	\$6	(\$3–\$8)	+\$2	BPM(7) MHE(8)	OL(14) MS(17) PR(19)
BPM	\$7	(\$4–\$9)	+\$2	BSE(2) AKE(6) MHE(8)	SX(16) MS(17) PR(19)
MHE	\$8	(\$4–\$10)	+\$2	KME(5) AKE(6) BPM(7)	OL(14) SX(16) MS(17) PR(19)

10.2 Orange companies

The orange companies are the railroads of the various German states in the middle of the 19th century. Again, you will find the same companies (with slightly different names) in Michael Meier-Bachl's *1835*. In addition, David Hecht's *18EU* features the BY and the PR, and Wolfram Jahnich's *18SX* the SX. In *Rolling Stock*, these companies start as private companies, in the 18xx games, they are corporations. Thus, the games are somewhat mis-representing history, as all these companies were state-owned.

Synergies with red companies are +\$1, all other synergies are +\$2.

WT	\$11	(\$6–\$14)	+\$3		BD(12) BY(13)	SBB(26) DR(29)
BD	\$12	(\$6–\$15)	+\$3	BME(1)	WT(11) HE(15)	SNCF(24) SBB(26) DR(29)
BY	\$13	(\$7–\$16)	+\$3		WT(11) HE(15) SX(16)	KK(25) DR(29)
OL	\$14	(\$7–\$18)	+\$3	KME(5) AKE(6) MHE(8)	MS(17) PR(19)	DSB(20) NS(21) DR(29)
HE	\$15	(\$8–\$19)	+\$3	BME(1) KME(5)	BD(12) BY(13) PR(19)	DR(29)
SX	\$16	(\$8–\$20)	+\$3	BSE(2) BPM(7) MHE(8)	BY(13) MS(17) PR(19)	PKP(23) KK(25) DR(29)
MS	\$17	(\$9–\$21)	+\$3	BSE(2) AKE(6) BPM(7) MHE(8)	OL(14) SX(16) PR(19)	DSB(20) PKP(23) DR(29)
PR	\$19	(\$10–\$24)	+\$3	BME(1) BSE(2) KME(5) AKE(6) BPM(7) MHE(8)	OL(14) HE(15) SX(16) MS(17)	DSB(20) NS(21) B(22) PKP(23) DR(29)

10.3 Yellow companies

The yellow tier of companies covers the late 19th and early 20th century. The DR is the state railroad of the now unified German Empire, while all the other yellow companies represent the railroad companies of the countries neighboring Germany. Again, these companies were most of the time state-owned. Representing them as tradeable companies is once more bending history a bit. You can find many of these companies in David Hecht's games: The SNCF, B, DR, NS, and KK in *18EU*, the SNCF and B also in *1826*, and the DSB in *18Scan*. Leonhard Orgler's *1837* features the KK, as does Leonhard Orgler's and Helmut Ohley's *1824*. The SBB is the largest company in Peter Minder's and Helmut Ohley's *1844: Switzerland*.

Synergies with orange companies are +\$2, all other synergies are +\$4.

DSB	\$20	(\$10–\$26)	+\$6	OL(14) MS(17) PR(19)	DR(29)	BSR(40)	HH(48)
NS	\$21	(\$11–\$27)	+\$6	OL(14) PR(19)	B(22) DR(29)	E(43)	HA(47) HR(49)
B	\$22	(\$11–\$28)	+\$6	PR(19)	NS(21) SNCF(24) DR(29)	E(43)	HA(47) HR(49)
PKP	\$23	(\$12–\$29)	+\$6	SX(16) MS(17) PR(19)	KK(25) DR(29)	SZD(31) BSR(40)	HH(48) FRA(58)
SNCF	\$24	(\$12–\$30)	+\$6	BD(12)	B(22) SBB(26) DR(29)	RENFE(32) FS(37) E(43)	HA(47) CDG(56)
KK	\$25	(\$13–\$32)	+\$6	BY(13) SX(16)	PKP(23) SBB(26) DR(29)	FS(37)	FRA(58)
SBB	\$26	(\$13–\$33)	+\$6	WT(11) BD(12)	SNCF(24) KK(25) DR(29)	FS(37)	CDG(56) FRA(58)
DR	\$29	(\$15–\$36)	+\$6	WT(11) BD(12) BY(13) OL(14) HE(15) SX(16) MS(17) PR(19)	DSB(20) NS(21) B(22) PKP(23) SNCF(24) KK(25) SBB(26)	BSR(40)	HH(48) HR(49) FRA(58)

10.4 Green companies

Historically, we are now moving deep into the 20th century. Geographically, we are expanding towards the periphery of Europe. Two companies are not strictly railroad companies: The E (representing the tunnel between Britain and France) and the BSR (a hypothetical company running the ferries, bridges and tunnels in the Baltic Sea). David Hecht's games feature two of the green companies: The FS in *18EU* and the SJ in *18Scan*.

All synergies are +\$4.

SJ	\$30	(\$15–\$42)	+\$12		BSR(40)	
SZD	\$31	(\$16–\$43)	+\$12	PKP(23)		
RENFE	\$32	(\$16–\$45)	+\$12	SNCF(24)		MAD(45)
BR	\$33	(\$17–\$46)	+\$12		E(43)	LHR(54)
FS	\$37	(\$19–\$51)	+\$10	SNCF(24) KK(25) SBB(26)		
BSR	\$40	(\$20–\$54)	+\$10	DSB(20) PKP(23) DR(29)	SJ(30)	HH(48)
E	\$43	(\$22–\$58)	+\$10	NS(21) B(22) SNCF(24)	BR(33)	HA(47) HR(49) LHR(54) CDG(56)

10.5 Blue companies

The blue tier of companies contains no railroad companies at all, but the modern seaborne and airborne competitors. HA, HH, and HR are the three largest container ports in Europe. MAD, LHR, CDG, and FRA are the four largest European airports. Passengers and cargo have to reach the ports and airports, so those companies are not only competitors of the railroad companies but also offer some opportunities to synergize. An airline company has been included, too, which synergizes with all airports. It is difficult to determine the most important airline in Europe, as that depends heavily on the chosen metric. In the end, *Ryanair* (FR) was picked as a proverbial low-fare airline in tough competition with the railroad, although it – ironically – only serves the smallest of the four airports represented in the game (MAD).

Synergies with green and yellow are +\$4, synergies with blue and purple are +\$8.

MAD	\$45	(\$23–\$67)	+\$15		RENFE(32)	FR(60)	VP(80) LE(90)
HA	\$47	(\$24–\$69)	+\$15	NS(21) B(22) SNCF(24)	E(43)		RU(85) AL(86)
HH	\$48	(\$24–\$70)	+\$15	DSB(20) PKP(23) DR(29)	BSR(40)		RU(85) AL(86)
HR	\$49	(\$25–\$71)	+\$15	NS(21) B(22) DR(29)	E(43)		RU(85) AL(86)
LHR	\$54	(\$27–\$77)	+\$15		BR(33) E(43)	FR(60)	MM(75) VP(80) LE(90)
CDG	\$56	(\$28–\$79)	+\$15	SNCF(24) SBB(26)	E(43)	FR(60)	VP(80) LE(90)
FRA	\$58	(\$29–\$82)	+\$15	PKP(23) KK(25) SBB(26) DR(29)		FR(60)	MM(75) LE(90)
FR	\$60	(\$30–\$84)	+\$15			MAD(45) LHR(54) CDG(56) FRA(58)	

10.6 Purple companies

The ultimate tier of companies takes us into space. You might recognize the companies as the corporations in Tom Lehmann's *2038*. Imagine the airports now running passenger flights to the colonies on Moon, Mars, and Venus. Heavier cargo to and from the asteroid belt and the outer planets goes via space elevators somewhere at the equator, which are linked to Europe by container ships.

Synergies with blue are +\$8, synergies with purple are +\$16.

OPC	\$70	(\$35–\$107)	+\$25		RU(85) AL(86) TSI(100)
RCC	\$71	(\$36–\$108)	+\$25		RU(85) AL(86) TSI(100)
MM	\$75	(\$38–\$112)	+\$25	LHR(54) FRA(58)	LE(90) TSI(100)
VP	\$80	(\$40–\$118)	+\$25	MAD(45) LHR(54) CDG(56)	LE(90) TSI(100)
RU	\$85	(\$43–\$123)	+\$25	HA(47) HH(48) HR(49)	OPC(70) RCC(71) TSI(100)
AL	\$86	(\$43–\$124)	+\$25	HA(47) HH(48) HR(49)	OPC(70) RCC(71) TSI(100)
LE	\$90	(\$45–\$129)	+\$25	MAD(45) LHR(54) CDG(56) FRA(58)	MM(75) VP(80) TSI(100)
TSI	\$100	(\$50–\$140)	+\$25		OPC(70) RCC(71) MM(75) VP(80) RU(85) AL(86) LE(90)