

An Apparatus for Simulating Financial Activities in a Person's Career Life

Field of the Invention

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The present invention relates to a game apparatus for simulating financial activities in a person's career life and particularly, but not limited to, a game apparatus for simulating financial activities to teach individuals how to manage personal finance so that they are able to be financially secured at the retirement age.

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Background

Games simulating wealth and risk management as well as wealth creation have been popular among different age groups since the invention of the famous Monopoly game.

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Many similar games have been designed for entertaining and/or educational purposes.

Robert Kiyosaki, in the PCT publication WO/1998/020948A1, has included spaces in the game board such as buying a forest, buying a goldmine, Russian oil deals and dinner with the President. However, all these activities are unrealistic and cannot be associated with common people who are dealing with the day-to-day financial issues. With such remote possibilities, it is difficult to associate the lessons learnt in the game with the reality.

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In the game designed by Hybrid entertainment in the PCT publication WO/2004/012832A1, it has demonstrated that the state of economy, such as boom, bust and recovery, can have effect on the individual wealth. However, the game seems to be overly simplistic as it focuses mainly on real estates and does not include other available investments. Furthermore, despite the focus on real estates, the game does not seem to take into consideration of the owner occupied property or home.

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Mr Campbell's US Patent No. 5071,135 dated at 10 Dec 1991 has incorporated several investments to provide passive incomes to replace the active income over time. However, it does not take into consideration of the changing state of economy that has a significant effect on one's wealth. Furthermore, it assumes life-long employment and retrenchments are not considered. However, retrenchments and high unemployment rate that happen in the recent years have significant effect on one's finance.

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In the recent US Patent Publication No. 2011/0123963, Karel Koremy has rightly pointed out that insurances, debts and mortgages have significant effect on personal finance in building assets. The game uses a dice throw to determine the change in the Net Asset Value (NAV) of the investments. However, the real effect appears to be overly-simplified as the NAV is randomly generated using dices.

In most of the financial games, any player who accumulates the maximum wealth wins the game. However, it is not representative of the real world, whereby different people have different incomes, and consequently, they convert their incomes into wealth differently. A person who earns a cumulative income of \$3 million in his lifetime and has a net-worth of \$1 million less his primary home is certainly a better wealth accumulator than another person who earns \$30 million in his lifetime, but only accumulates \$2 million of wealth.

Another consideration appears that many of these games do not take into account of homes in the game dynamics. To many individuals and families, home is one of the biggest investments in their lifetime. Many families might not have gotten into financial difficulties if they did not buy a home that they could not really afford. Hence, any game without taking into consideration of a home mortgage or rental may not be reflective of the real-life situation.

Another aspect is that the real world has become smaller such that communication is becoming faster and travelling is getting shorter. As we move into globalization, significant world events have become even more impactful on our financial lives. In particular, many people's financial wealth are affected by remote events that they have absolutely no control. For example, the sub-prime problems got degenerated into a global financial crisis, and had decimated the net-worth of many people around the world. A few people eating some exotic food in southern China led to Severe Acute Respiratory Syndrome (SARS) caused the stock markets in Asia to plunge significantly. Over in Europe, having a low interest rate for a prolonged period have led the governments to overspend, leading to the Euro crisis, which again has been putting pressure on the stock markets globally.

Summary of the Invention

In accordance with an aspect of the present invention, there is provided an apparatus for simulating financial activities with a plurality of players, each player being one profession

from a plurality of professions, comprising: a board having a plurality of spaces arranged about the periphery of the board; at least one cash flow table for each player indicating assets of the player; a token for each player for indicating movement of the player on the board; at least one reference table indicating attributes of a financial activity simulated for the players; at least one set of cards, each card representing a financial event affecting the assets of at least one player; and a random number generator for generating a number to determine the movement of each player on the board; wherein the plurality of spaces comprises a plurality of profession-related spaces, each profession-related space being associated with a financial activity relevant to at least one predefined profession among the plurality of professions and allowing a player of the at least one predefined profession to perform the financial activity when the token for the player lands on the profession-related space.

The at least one cash flow table may be used to calculate a wealth conversion ratio at the end of the game for each player to determine a winner of the game to be a player having the highest wealth conversion ratio, the wealth conversion ratio being a ratio of a total wealth of the player at the end of the game to a total income received by the player in the game.

The apparatus may further comprise a profession change matrix indicating eligibility of a change in profession among the plurality of professions. The profession change matrix may further indicate the payout required for the change in profession. One of the plurality of professions may not be allowed at the start of the game and be allowed only by a change in profession.

The plurality of spaces may further comprise an economy indicator space which causes a change in a state of economy when the token for a player assigned as a playmaker lands on the economy indicator space. The state of economy may be either normal or in recession. The attributes of the financial activity may change according to the state of the economy.

The plurality of spaces may further comprise a start space which allows a player to receive income each time the token for the player passes the start space, and an amount of the income of the player may be associated with the profession of the player and a random number generated by the random number generator. The start space may further allow a player to purchase a home when the token for the player passes the start space

and the purchase has to be performed once by the end of the game. The start space may further allow a player to purchase insurance when the token for the player passes the start space.

- 5 The income of a player may change according to the state of the economy.

One round of the plurality of spaces may present four years in the players' career life and each player may be allowed to play a fixed number of rounds according to the profession of the player.

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The income of a player may change according to the number of rounds that has been completed. The attributes of a financial activity may change according to the number of rounds that has been completed.

- 15 The plurality of spaces may further comprise a plurality of investment spaces, each investment space allowing a player to engage in an investment when the token for the player lands on the investment space.

20 The apparatus may further comprise simulated currency for transaction of the financial activities.

The plurality of professions may include an operator, a manager, a specialist, an entrepreneur and a sportsman.

- 25 The assets of a player at the start of the game may depend on the profession of the player and the assets may be allowed to be negative at the start of the game.

30 The apparatus may further comprise a table of formulae for each profession to calculate the income of the profession for each round; a table showing financial liabilities for each profession; and at least one table of formulae for calculating the attributes of a financial activity.

Brief Description of the Drawings

- 35 Various embodiments of the invention will now be described, by way of example only, and with reference to the accompanying drawings in which:

FIG. 1 is a schematic view of a board of a game for simulating financial activities in a person's career life.

- 5 FIG. 2 illustrates a profession change matrix showing eligibility of a change in profession and payouts required for an allowed change in profession.

FIG. 3 shows an example of a draw card classified as a "What's there for me?" draw card.

- 10 FIG. 4 shows an example of a draw card classified as a "What a fateful day!" draw card.

FIG. 5A shows a table of income in a cash flow worksheet for an operator.

FIG. 5B shows a section of financial liabilities in the cash flow worksheet for the operator.

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FIG. 5C shows a table of investments in the cash flow worksheet for the operator.

FIG. 6A shows a table of income in a cash flow worksheet for a manager.

- 20 FIG. 6B shows a section of financial liabilities in the cash flow worksheet for the manager.

FIG. 6C shows a table of investments in the cash flow worksheet for the manager.

FIG. 7A shows a table of income in a cash flow worksheet for a specialist.

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FIG. 7B shows a section of financial liabilities in the cash flow worksheet for the specialist.

FIG. 7C shows a table of investments in the cash flow worksheet for the specialist.

- 30 FIG. 8A shows a table of income in a cash flow worksheet for an entrepreneur.

FIG. 8B shows a section of financial liabilities in the cash flow worksheet for the entrepreneur.

- 35 FIG. 8C shows a table of investments in the cash flow worksheet for the entrepreneur.

FIG. 9A shows a table of income in a cash flow worksheet for a sportsman.

FIG. 9B shows a section of financial liabilities in the cash flow worksheet for the sportsman.

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FIG. 9C shows a table of investments in the cash flow worksheet for the sportsman.

FIG. 10A shows a table of home mortgage when an economy of the game is in a NORMAL state for all professions.

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FIG. 10B shows a table of home mortgage when the economy of the game is in a RECESSION state for all professions.

FIG. 10C shows a table of insurance premiums for all professions according to their age

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FIG. 11A shows a table of purchasing and redemption prices of a first type of investments as well as the corresponding financial returns available in the game for NORMAL and RECESSION state of economy.

20 FIG. 11B shows a table of purchasing and redemption prices of a second type of investments as well as the corresponding financial returns available in the game for NORMAL and RECESSION states of economy.

25 FIG. 11C shows a table of purchasing and redemption prices of a third type of investments as well as the corresponding financial returns available in the game for NORMAL and RECESSION states of economy.

30 FIG. 11D shows a table of purchasing and redemption prices of a fourth type of investments as well as the corresponding financial returns available in the game for NORMAL and RECESSION states of economy.

FIG. 11E shows a table of purchasing and redemption prices of a fifth type of investments as well as the corresponding financial returns available in the game for NORMAL and RECESSION states of economy.

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Detailed Description of the Invention

FIG. 1 shows a board (100) of a game for simulating financial activities in a person's career life whereby a number of players compete to win the game. The board (100) has a plurality of spaces (101 to 120) arranged about the periphery of the board (100), bearing indicia of instructions for the play of the game. Although the spaces 103, 104, 108, 109, 113, 114, 118 and 119 are arranged differently from other spaces, each pair of them is one space. Each player of the game is represented by a token which moves among the spaces on the board (100) in a clockwise direction based on a number generated by a random number generator, for example, a single dice. One round of the spaces represents four years in a player's career life. Each player performs financial activities allowed by the spaces on which his token lands in order to maximize his wealth or assets during the game. The financial activities in the game may include, but not limited to, receiving an income for each round, purchasing a home which is an owner occupied property, purchasing an insurance policy, purchasing and selling investments and other activities that may change a player's net worth, or assets. The game may be played with simulated currency for transaction performed in the game.

The board (100) may accommodate 2 to 9 players. To stimulate the real life circumstances, each player starts the game with a profession. There are five types of professions in the game: an operator, a manager, a specialist, an entrepreneur and a sportsman. These five types of professions generally represent five broad categories of professions having similar characteristics, especially similar characteristics in obtaining income, and they should not be interpreted literally. For example, an operator may be a production worker on a production line, a clerical staff in an office or a service personal in a restaurant. Other professions may be similarly construed. The main characteristics of the five professions are described below.

An operator is a salaried employee who does not undergo a tertiary education. He is assumed to enter the workforce in his early twenties. Thus, he has 11 rounds, which is 44 years, to play on the board (100) until reaching the age of 65 if he chooses to be the operator for his whole life. He enjoys a salary increment for the fixed portion of his salary in each round until the age of about late-40s, but is subject to a salary decline each round thereafter as he is easily replaced by younger, cheaper and more energetic substitutes. Production operators, corporate front line employees such as waiters, receptionists may be classed under this profession.

A manager is a salaried employee who has undergone a tertiary education. He enters the work force in his mid-20s since he has to spend 4 years or 1 round on his tertiary education. Thus, he has 10 rounds, which is 40 years, to play on the board (100) until reaching the age of 65 if he chooses to be the manager for his whole life. He enjoys a salary increment each round until the age of about late 40s to early 50s, but is subject to a salary decline each round thereafter as his skills become obsolete. He is then easily replaceable by younger, cheaper and more energetic managers. Corporate managers, senior managers, bank managers and vice-presidents, company lawyers, production engineers and company accountants may fall under this category of salaried profession.

A specialist is self-employed. He can only be promoted from a manager. No one is able to start a career as a specialist because he has to develop or undergo specific trainings in his area of specialty. Thus, the specialist is a profession that cannot be selected at the start of the game. The specialist starts his career at an entry level. His income increases throughout his career life as he gains fame and experience. His skills are specific and useful. Surgeons, doctors, dentists, specialist lawyers, professional accountants and professional engineers may be classified under this category of profession.

An entrepreneur is a self-employed businessman. He has a very low basic income, mainly relying on simple jobs to support himself while he develops his entrepreneur skills. As the entrepreneur may not be always successful in bidding projects, he has to embark on simple jobs to sustain himself. These jobs offer a relatively constant income and are not inflation-hedged. He cannot afford himself a home relying on his basic income and has to depend on bidding to win projects in order to augment his income. Thus, the entrepreneur can only prosper by winning projects. If he fails to win any projects in his career lifetime, he may not even be able to afford himself a home which is the basic criterion to win the game. In other words, he takes on a huge amount of risk in hope for a high potential gain. The entrepreneur does not need to have a tertiary education. As he starts his career in his early 20s, he has 11 rounds, which is 44 years, to play on the board (100) until reaching the age of 65. As he plays more rounds, his income resulting from projects continues to increase if he successfully bids for a project whenever he steps on project spaces (104, 109, 114 and 119) of the board (100). Businessman, contractors, speakers, developers, designers, food sellers and inventors or any professions that command very low income and, often, irregular income before they gain recognition by the society. However, once their products or services are accepted by the society, it is often seen that their incomes start to multiply many folds.

A sportsman has a relatively short career span of about 15 to 20 years. His income peaks very fast to mid-30 but declines drastically thereafter. At about 40 years old, he may choose to retire (no active income thereafter) or change to a manager or an entrepreneur.

5 Examples of such professions are boxers, footballers, and some entertainers like actors and singers.

As no one is able to start a career as a specialist, each player takes a role of the operator, the manager, the entrepreneur or the sportsman at the start of the game. Each profession
10 may accommodate more than 1 player.

At the start of the game, the financial position is zero for the operator, the entrepreneur and the sportsman, and negative for the manager as he needs to borrow money to complete his tertiary education.

15 All players, regardless of the professions, have to own a home by the end of the game. The home mortgage they pay depends on their professions and the number of the rounds they have played. As to when he wants to buy a home depends on his decision and whether he has the means to pay for the mortgages. However, it has to be noted that the
20 price of the home gets more expensive as years pass by.

Apart from a home, the players are advised to purchase insurances to protect themselves against unexpected happenings that can cripple their financial life. They may choose to purchase insurance whenever they think necessary. The premium of the insurance is also
25 based on their professions and their age (the number of rounds they have played).

Unlike conventional financial games where each player starts with the same of amount of initial assets, mostly cash, each player in the game starts with a different amount of initial assets based on his profession. For example, when a player chooses to be a manager at
30 the start of the game, he has to incur a debt resembling a study loan of \$50,000. This debt is interest bearing and carries a certain interest for the remaining loan in the next round. For example, the interest rate for the study loan may be set as 20%. If a player starting as the manager does not want to pay –too much interest for his debt, he may choose to deduct it in full from his salary for the first round.

There may be a facilitator of the game, or a banker, who is in charge of the money and all transactions in the game. The facilitator holds at least one reference table having attributes of major financial activities in the game. For example, he may hold property mortgage and insurance tables as well as formula tables for purchase and redemption of all the investments. The attributes of these financial activities are to be hidden from the players to simulate that this information is future data as no one knows the future price of the homes, insurances and investments. For example, a player is only able to know the home mortgage that he is paying when he decides to buy a home. However, he has no clues as to what will be the price or the mortgage that he needs to pay several years down the road. Hence, it is important that the facilitator keeps the tables of information away from the players. It may not be necessary to have a facilitator of the game if the game is played electronically with the aid of a processor. At least one reference table having attributes may be stored in a memory accessible to the processor and thus the processor is able to take the role of the facilitator.

As shown in FIG. 1, the board (100) has a start space (101), the point in which all players, being the operator, the manager, the entrepreneur or the sportsman begin the game. The start space (101) marks the beginning of each round. At the beginning of the game and each time when the token representing a player passes the start space (101), the player receives an income which is made up of a fixed portion and a variable portion. The fixed portion depends on his profession and the variable portion is determined by a random number generated by a random number generator as the player is given a chance to operate the random number generator. For example, the player may throw a dice to determine the random portion of his salary. The random number generator which is used to determine the random portion of the income can be the same random number generator used to determine the movement of each player on the game board, or it may be a different random number generator. When passing the start space (101), the player may make important decisions such as to purchase a home or to purchase insurance for protection, or both. The player may also choose to change his profession when passing the start space (100) and the details of the profession change will be explained in a later part of the description.

There is provided a plurality of investment spaces (102, 107, 112, 117 and 120) on the board (100) which allows the players to buy different types of investments when they land on these spaces. Each investment space (102, 107, 112, 117 or 120) represents a different type of investment corresponding to what is available in the financial market. For

example, investment space 102 represents unit trust; investment space 107 bond; investment space 112 shares; investment space 117 trading; and investment space 120 real estate. The types of investments are not limited to the aforementioned examples, and other types of investments may be used in the game. A player landing on an investment space can check with the facilitator of the game on the attributes of the investments, which include the purchasing price and units to be purchased at a given state of economy. The investments purchased may be redeemed or sold after passing the start space (101), or they may be required to be sold immediately after purchase. For example, on the board (100), the investments purchased on the investment spaces 102, 107, 112 and 120 may only be redeemed after passing the start space (101), and the investments purchased on the investment space 117 has to be sold immediately. Some investments when being kept by the players may generate financial returns in the form of dividends or rental incomes when the tokens of the players pass the start space (101). The amount of financial returns depends on a state of economy and the type of investments.

The board (100) has an economy indicator space (111). When a player who is selected as a playmaker lands on the economy indicator space (111), he toggles or changes the state of the economy in the game from a state of NORMAL to a state of RECESSION, or vice versa. The state of the economy may also be reflected on a state of economy card. The change in the state of the economy changes a number of parameters including the attributes of some financial activities, such as the income of the players and the value and mortgage of the home as well as the purchasing and redemption prices of the types of investments. More than one player may be selected as playmakers. The increase in the number of playmakers makes the game more susceptible to changes in economy. The economy indicator space, however, does not incorporate the inflationary state as inflation has already been build in the game, such as the gradual increase in the price of housing and the income of the professionals. The gradual increase in these prices is indicative of the real life inflationary trend in the long run.

A lucky draw space (106) is provided on the board (100), which simulates the circumstances when we may be sometimes lucky to win some money or rewards. Examples are winning a contest or a lucky draw. Such luck helps spice up our life without any financial outlay.

Another space related to luck, the "Are You Lucky?" space (116) is also provided on the board (100). It simulates the circumstances when we may feel lucky and decide to make a

bet on a lottery or some form of gambling. With a small bet, a player gets a chance to win a price a number of times of the bet, for example, 5 times. A player landing on the "Are You Lucky?" space is required to meet a condition in order to win the price. For example, the player is deemed to win the bet when he throws a double, such as 2 '1's, 2 '2's, 2 '3's, etc. with a pair of dice used as the random number generator.

The board (100) has two types of draw card spaces, "What's there for me?" draw card spaces (105 and 115), and "What a fateful day!" draw card spaces (108 and 118). In reality, most of us are affected by happenings around us, which may or may not be within our control. These draw card spaces provide the random events for the game. They can be financially rewarding or can blow up the player's finance, similar to events that could happen to us in our daily lives. When a player lands on a "What's there for me?" draw card space, he draws a card from a corresponding set of draw cards. This set of draw cards usually affects only the player who draws the card. For example, the player may be required to settle hospitalization bills or pay cash to fulfill other healthcare needs. Of course, if the player has purchased insurance, he may be protected from some of the unexpected expenditures covered by the insurance.

Similarly, when a player lands on a "What a fateful day!" draw card space, he draws a card from a corresponding set of draw cards. However, the set of draw cards for "What a fateful day!" tends to affect certain players or all the players. Some examples of the random events on this set of draw cards are an epidemic, a mass retrenchment or other events resulted from world crises. An example of a "What's there for me?" draw card (300) is shown in FIG. 3 which causes a 20% reduction in the income of the player drawing the card. An example of a "What a fateful day!" draw card (400) is shown in FIG. 4 which grants all the players an opportunity to buy an investment at a discount with an upper limit on the units to be purchased. The state of the economy of the game may also be changed when any player draws a draw card which triggers the change.

The board has a tax space (103) which requires the player to pay taxes for all properties owned by the player, including his home and the real estate investments if any, similar to the property tax in our real life. The tax rate may vary from game to game. For example, a 5% tax rate may be set in the game. Any player who lands on this space is required to pay 5% tax in the form of cash on his home as well as the investment properties that he had purchased previously when he lands on the investment space 120 representing a real estate investment.

An impulsive purchase space (113) is provided on the board (100) to reflect a human behavior where we may sometimes be tempted to make an impulsive purchase, such as buying a digital television, spending on a golf set or going on an expensive tour. The quantum of impulsive purchase, however, varies in accordance with the type of profession, as well as the number generated by the random number generator.

A number of project spaces (104, 109, 114 and 119) are provided on the board (100). These spaces are related to the profession of the entrepreneur only and provided strategically to enable the entrepreneur to bid for projects to enhance his income. Unlike the other professions, the entrepreneur's basic income per round is meager and remains relatively constant throughout the game. Thus, he is exposed to inflation given that the price of a home keeps increasing over the years. In order to survive and prosper, he has to bid and win projects upon landing on these spaces to obtain more income. Projects usually require some form of financial outlay in order to reap bigger financial rewards. Landing on these spaces allow the entrepreneur reap financial rewards based on his investment for the projects. The quantum of the financial reward increases with the rounds as the entrepreneur attains more experience in his area of specialty.

A bonus space (110) is provided on the board (100). This space is related to employees only, such as the operator or the manager among the professions. The players of these professions are entitled to a bonus, which may be 20% of the income for that round when their tokens land on the bonus space. The specialist, the entrepreneur and the sportsman are not entitled to such bonus as they are not employees.

As shown in FIG.1, three card spaces 121, 122 and 123 may be provided in the middle of the board. Card space 121 is for the placement of the state of economy card, which indicates either a state of NORMAL or a state of RECESSION. The initial state of the economy is set to NORMAL. Card space 122 and 123 are for the placement of "What a fateful day!" and "What's there for me?" draw cards respectively.

As mentioned earlier, as the players advance in the game, they may remain in the same profession or request to be upgraded or change to another profession after passing the start space (101). FIG. 2 shows a profession change matrix (200) illustrating the eligibility of profession change and payouts associated with the change. The column 202 lists the professions before change and the row 204 lists the professions after change. Certain

profession changes are not allowed. For example, the operator, the entrepreneur, the manager or the specialist is not allowed to become the sportsman as the sportsman has to have a special talent and it would be too late even at their 20s for other professions to be trained as the sportsman. For some profession changes, fees have to be paid as one
5 may need to undergo further education or training in order to change from one profession to another profession.

According to the matrix shown in FIG. 2, an operator is able to upgrade to a manager if he chooses to do so after passing the start space (101). However, he has to pay \$50,000
10 since he has to learn new skills. In addition, he is assumed to spend time to acquire the skills. Consequently, his career life is reduced from 44 years to 40 years which is equivalent to 10 rounds in the game. After the profession change, his salary as a manager starts at the entry level, the same as that of a manager at the beginning of the game. The operator may also choose to be an entrepreneur. No fee is needed for the change, but his
15 salary as an entrepreneur has to start at the entry level.

According to the matrix shown in FIG. 2, a manager is able to upgrade to a specialist if he chooses to do so. However, he has to pay \$50,000 to learn new skills. There is no change in the rounds (total 10 rounds) of play because he has to attain his specialized skills while
20 on the job and through part-time education. His new income as a specialist starts at the entry level. The manager may also choose to be an entrepreneur. No fee is needed for this change, but his salary as an entrepreneur has to start at the entry level.

A specialist may choose to be an entrepreneur. No fee is needed for the change, but his
25 salary as an entrepreneur has to start at the entry level.

An entrepreneur may choose to be an operator. The change is assumed to be a lateral move and thus no fee is required. However, he has to start as an operator at the entry level. His earlier rounds as the entrepreneur together with his rounds as the operator must
30 not exceed a total of 11 rounds of play. An entrepreneur may choose to be a manager by paying \$50,000 for his education. As his education is assumed to be full-time, he also has to reduce his play to a total 10 rounds, including his rounds as an entrepreneur. He also has to start at the entry level as a manager.

35 A sportsman may choose to retire (no active income thereafter) or change to a manager or an entrepreneur when he is no longer able to continue as the sportsman at about 40

years old, or after 5 rounds of the game. No fee is required if he chooses to become a manager, but he has to start at the entry level as a manager. He retires at the end of 5th round as the manager. No fee is required if the sportsman chooses to be an entrepreneur. He retires at the end of the 5th round as the entrepreneur. However, he does not receive income and his only way to make money is to bid for projects. He starts at the entry level as an entrepreneur.

The players are able to change their professions according to the profession change matrix shown in FIG. 2 and the rules as described above. Multiple changes are permitted.

For example, an operator or an entrepreneur is able to become a manager first and then to a specialist. However, a player has to think carefully before a profession change as the profession change causes the player to start at the entry level, or the lowest scale of salary, in his new profession.

A cash flow worksheet for each profession is provided in the game. During the game, each player has at least one cash flow worksheet which records his income, commitment and investments to indicate his net worth or assets. Each player starts with a cash flow worksheet corresponds to that of his profession. When a player changes his profession, he has to make records of his income, commitment and investments in a cash flow worksheet corresponds to that of his new profession for the rounds in which he plays as his new profession. A cash flow worksheet includes three parts: income, commitment and investments. For example, the worksheet of the operator includes a table of income (500) as shown in FIG. 5A, a section of commitment or financial liabilities, including home mortgage and insurance, as shown in FIG. 5B, and a table of investments (530) as shown in FIG. 5C. The worksheets of other professions have similar sections as shown in FIGS. 6A to 6C, FIGS. 7A to 7C, FIGS. 8A to 8C and FIGS. 9A to 9C.

Each player has to record his income in the table of income of his cash flow worksheet. In FIG. 5A, the formulae to compute the income of the operator are provided in the table of income of the worksheet of the operator. The column 502 shows the formula for his income for each round when the economy is in the NORMAL state and the column 504 shows the formula for his income for each round when the economy is in the RECESSION state. His income is made up of two portions, a fixed portion and a variable portion. The fixed portion depends on his profession and the variable portion is determined by a random number generated by the random number generator as the player is given a chance to operate the random number generator. For example, the

player may throw a dice to determine the variable portion of his salary income when he passes the start space (101).

In FIG. 6A, the formulae to compute the income of the manager are provided. The column 602 shows the formula for his income for each round when the economy is in the NORMAL state and the column 604 shows the formula for his income for each round when the economy is in the RECESSION state. Similar to the operator, the income of the manager is made up of two portions, a fixed portion and a variable portion.

For salaried professions, such as the operator or the manager, their income increases in every round during the earlier rounds. This is due to the fact that these salaried employees are young and their productivity increases with experience. However, their salary level starts to taper off and even decline after mid-40s to early-50s. The reason being that while these salaried employees gain experience with age, their productivity, energy level and health issues can affect their career, thus opening up the possibility of being replaced by younger and more energetic employees. To stay in the job, they have to work with lower salaries.

In FIG. 7A, the formulae to compute the income of the specialist are provided. The column 702 shows the formula for his income for each round when the economy is in the NORMAL state and the column 704 shows the formula for his income for each round when the economy is in the RECESSION state. Similar to the operator, his salary is made up of two portions, a fixed portion and a variable portion. For the specialist, the income increases throughout the career lifespan. It is because despite having less energy as he ages, the specialist also gains experience and recognition as a self-employed to be able to maintain his income. His specialized skill set forms a natural barrier to entry against new entrants coming into his trade.

In FIG. 8A, the formulae to compute the income of the entrepreneur are provided. The column 802 shows the formula for his basic income for each round regardless of the state of the economy. Similar to the operator, his basic income is made up of two portions, a fixed portion and a variable portion. The column 802 shows the formulae for his income derived from simple subsistence jobs, and the column 804 tabulates the formulae if he successfully bids for projects during NORMAL/RECESSION state of the economy. Experience level also applies to the entrepreneur. As he plays more rounds, his income

resulting from projects continues to increase if he successfully bids for a project whenever he lands on the project spaces (104, 109, 114 and 119).

In FIG. 9A, the formulae to compute the income of the sportsman are provided. The column 902 shows the formula for his income for each round when the economy is in the NORMAL state and the column 904 shows the formula for his income for each round when the economy is in the RECESSION state. Similar to the operator, his income is made up of two portions, a fixed portion and a variable portion. The sportsman has a relatively short career span of about 15 to 20 years. His income peaks very fast to mid-30 but declines drastically thereafter. At about 40 years old, he may choose to retire or change to the manager or the entrepreneur. The columns 906 and 910 show the formulae for his income as the manager for each of the remaining rounds for the NORMAL state of the economy and RECESSION state of the economy. The columns 908 and 912 show the formulae for his income from projects as the entrepreneur for each of the remaining rounds for the NORMAL state of the economy and RECESSION state of the economy.

It is noted that the income for all the professions in the game computed by the formulae provided are not equivalent to the take-home pay or the actual disposal income. The income in the game has already excluded day-to-day expenses, including expenses for food, transport, groceries, utilities, telephone bills, children's education, personal income taxes, gift to parents, charities, etc. The income is, in effect, the portion of the disposal income that the players of the respective professions can utilize to buy a home, to pay for insurance or to make any forms of investments. In addition, the formulae provided in FIGS. 5A to 9A are examples only, and they may be modified according to circumstances or for the balance of the game. Furthermore, other formulae that are able to reflect the characteristics of the professions in obtaining income and are reasonable may be used.

FIG. 5B to FIG. 9B show the commitment or financial liabilities of each of the professions respectively. In this part of the cash flow worksheet, the number of rounds when the player of the profession purchases a home and the amount of mortgage he has to pay for each round are recorded. Tables 520 to 920 for recording the mortgage payment for each round are provided for each of the professions respectively. The number of rounds when the player of the profession purchases insurance and the amount of premium he has to pay for each round are also recorded. Tables 522 to 922 for recording the insurance payment for each round are provided for each of the professions respectively.

FIG. 5C to FIG. 9C show the tables (530 to 930) for recording the investments purchased for each round for each of the professions respectively.

Each time a player makes a profession change, he has to start from the entry level on the income scale. For example, if an operator converts to a manager at the start of the 3rd round, his salary as the manager for the 3rd round is the lowest income scale of the manager even though he is already at 3rd round of play. Thus, he receives an income according to the formula of Round 1 in column 602 (which is $\$35,000 + \text{Dicex}\$5,000$) or column 604 (which is $\$23,000 + \text{Dicex}\$5,000$) depending on whether the economy is in the NORMAL state or in the RECESSION state.

The reference information kept by the facilitator comprises a table (1000) of home mortgage during the NORMAL state of the economy for all professions shown in FIG. 10A, a table (1010) of home mortgage during the RECESSION state of the economy for all professions shown in FIG. 10 B and a table (1020) of insurance premium for all professions shown in FIG. 10C.

As the insurance premium depends on age and profession in the game, the players have to pay their insurance premium based on the number of rounds in the new profession. For example, when an operator, who pays \$1,600 at the 5th round, converts to be the manager at the 6th round, has to pay a premium of \$4,700, which is the insurance premium for a manager at the 6th round shown in the table 1020. However, it is noted that if a player has purchased a home before a profession change, the home mortgage does not change after the profession change because the player is still staying in and paying for the same home. The home mortgage does not change unless the player changes his home.

The other reference information kept by the facilitator comprises tables 1100, 1120, 1140, 1160 and 1180 indicating the purchasing and redemption prices as well as the financial returns of the different types of investments available in the game shown in FIGS. 11A to 11E. The types of the investments include, but not limited to, unit trust, bond, shares, trading and real estate. The purchasing price, the redemption price as well as the financial returns vary according to the types of investment. Referring to FIG. 11A, cells 1102 and 1108 show the purchasing prices of unit trust in NORMAL and RECESSION states of the economy respectively. Cells 1104 and 1110 show the dividends in NORMAL and RECESSION states of the economy respectively. Cells 1106 and 1112 show the

corresponding redemption values in NORMAL and RECESSION states of the economy respectively. FIG. 11B shows information for bond, FIG. 11C for shares, FIG. 11D for trading and FIG. 11E for real estate. It is also noted that the numbers shown in these figures are examples only, and they may be modified according to circumstances or for the balance of the game.

As the players may start as different professions with different income levels, it is important to normalize the total wealth against the total income at the end of the game to decide the winner of the game. The cash flow worksheets are used to calculate a wealth conversion ratio (WCR) at the end of the game. The WCR measures how well a player is able to convert his income into assets despite all the financial setbacks that he encounters during his career life, and the player having the highest WCR is the winner of the game.

A formula that derives the WCR is shown below, and the WCR is calculated as the quotient of the total wealth accumulated by a player against his total income. The total wealth is represented as the total net-worth of the player excluding the value of the home owned by the player.

Wealth Conversion Ratio (WCR) = (Total net-worth excluding the value of the home)/Total income.

To find the total wealth at the end of the game, each player is required to divest all his investments except his home into cash, based on the prevailing state of the economy. By adding up all the cash the player has after the divestment, the total wealth of the player is obtained. By adding up the income received by the player for each round, the total income of the player is correspondingly obtained.

During the play of the game, the players may be allowed to negotiate among themselves about business transactions and even borrow money from the others or the facilitator of the game.

While private arrangements are permitted in terms of borrowing or negotiating business transactions, players have to ensure that any purchase of investments must have an owner. That is, the ownership of an investment must be one of the players in order to entitle him a financial return such as a dividend or a capital gain. As to how he shares with

his collaborators or give to other players as a gift is a private matter between the involved players.

The facilitator of the game, or the bank, is allowed to issue credit cards to players with an up-front charge of \$30. A credit card loan is subject to interest payment in the following round. For example, an interest rate of 100% (the interest rate of credit card loan for 4 years) may be set. The facilitator has a priority over the debt. This means that before the disbursement of income, the facilitator has the right to deduct the amount of credit card loan in the following round.

Similarly, a player is allowed to borrow cash from the facilitator. However, the loan is interest-bearing and has to be paid in the subsequent rounds. For example, an interest of 20% on the outstanding loan may be set for each round.

Before any player proceeds to borrow from the bank, he may wish to consider selectively divesting some or all of his investments. This is to circumvent the need to pay for the interest. The decision to borrow or to divest his investment is purely personal and has to be made by the individual player.

The exemplary game as described above simulates the real life circumstances in many aspects. The players start the game in different professions at the age of early twenties to mid-twenties depending on their professions to simulate the start of their career life. By making the rounds on the game board, their career life is fast forward to eventually determine whether they can be financially secured or achieve financial freedom at the age of 65. Financial freedom is the financial state of a person such that he no longer needs to depend on his income from work to maintain his livelihood. In the exemplary game, different professions are given different incomes, of which they have to allocate these incomes for housing mortgage, insurance and to make investments. They are simulated with opportunities and random events in their career life that could either improve or derail their financial state. After experiencing a host of financial ups and downs in the game, the player who is most efficient in converting his income into wealth wins the game.

While the game is suitable for all age groups above 6 years old, it is ideal for young adults and teenagers who are making plans to embrace their financial future. Besides educational value, the game is also able to provide entertainment and bonding for families

and friends in get-together sessions. In addition, an adapted version of the game may be played via the internet, on smart phones or any technology media that allows data transfer.

5 Whilst there has been described in the foregoing description an example of the present invention, it will be understood by those skilled in the technology concerned that many variations or modifications in details of design may be made without departing from the present invention.

Claims

1. An apparatus for simulating financial activities with a plurality of players, each player being one profession from a plurality of professions, comprising:
- 5 a board having a plurality of spaces arranged about the periphery of the board;
at least one cash flow table for each player indicating assets of the player;
a token for each player for indicating movement of each player on the board;
at least one reference table indicating attributes of a financial activity simulated for the players;
- 10 at least one set of cards, each card representing a financial event affecting the assets of at least one player; and
a random number generator for generating a number to determine the movement of each player on the board;
wherein the plurality of spaces comprises a plurality of profession-related spaces,
- 15 each profession-related space being associated with a financial activity relevant to at least one predefined profession among the plurality of professions and allowing a player of the at least one predefined profession to perform the financial activity when the token for the player lands on the profession-related space.
- 20 2. The apparatus of claim 1, wherein the at least one cash flow table is used to calculate a wealth conversion ratio at the end of the game for each player to determine a winner of the game to be a player having the highest wealth conversion ratio, the wealth conversion ratio being a ratio of a total wealth of the player at the end of the game to a total income received by the player in the game.
- 25 3. The apparatus of claim 1 or 2, further comprising a profession change matrix indicating eligibility of a change in profession among the plurality of professions.
4. The apparatus of claim 3, wherein the profession change matrix further indicates
- 30 the payout required for the change in profession.
5. The apparatus of claim 3 or 4, wherein one of the plurality of professions is not allowed at the start of the game and is allowed only by a change in profession.
- 35 6. The apparatus of any one of the preceding claims, wherein the plurality of spaces further comprises an economy indicator space which causes a change in a state of

economy when the token for a player assigned as a playmaker lands on the economy indicator space.

7. The apparatus of claim 6, wherein the state of economy is either normal or in recession.

8. The apparatus of claim 6 or 7, wherein the attributes of a financial activity change according to the state of the economy.

9. The apparatus of claim 1, wherein the plurality of spaces further comprises a start space which allows a player to receive an income each time the token for the player passes the start space, and an amount of the income of the player is associated with the profession of the player and a random number generated by the random number generator.

10. The apparatus of claim 9, wherein the start space further allows a player to purchase a home when the token for the player passes the start space and the purchase has to be performed once by the end of the game.

11. The apparatus of claim 9 or 10, wherein the start space further allows a player to purchase insurance when the token for the player passes the start space.

12. The apparatus of any of claims 9 to 11, wherein the income of a player changes according to a state of the economy.

13. The apparatus of any of claims 9 to 12, wherein one round of the plurality of spaces presents four years in the players' career life and each player is allowed to play a fixed number of rounds according to the profession of the player.

14. The apparatus of claim 13, wherein the income of each player changes according to the number of rounds that has been completed.

15. The apparatus of claim 13 or 14, wherein the attributes of a financial activity further change according to the number of rounds that has been completed.

16. The apparatus of any one of the preceding claims, wherein the plurality of spaces further comprises a plurality of investment spaces, each investment space allowing a player to engage in an investment when the token for the player lands on the investment space.

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17. The apparatus of any one of the preceding claims, further comprising simulated currency for transaction of the financial activities.

18. The apparatus of any one of the preceding claims, wherein the plurality of professions includes an operator, a manager, a specialist, an entrepreneur and a sportsman.

19. The apparatus of any one of the preceding claims, wherein the assets of a player at the start of the game depend on the profession of the player and the assets are allowed to be negative at the start of the game.

20. The apparatus of any one of the preceding claims, further comprising a table of formulae for each profession for calculating the income of each profession for each round.

21. The apparatus of any one of the preceding claims, further comprising a table showing financial liabilities for each profession.

22. The apparatus of any one of the preceding claims, further comprising at least one table of formulae for calculating the attributes of a financial activity.

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23. The apparatus of any one of the preceding claims, wherein the financial activities includes receiving an income, purchasing a home, purchasing an insurance policy, purchasing and selling investments.

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