**Week1**

1. An example of Fintech 1.0 would be:

* Digital banking solutions
* **Analog communication and transmission technology**
* Diversified digital finance offerings from start-ups

2. An example of Fintech 2.0 would be:

* Diversified digital finance offerings from start-ups
* Analog communication and transmission technology
* **Digital banking solutions**

3. An example of Fintech 3.0 would be:

* **Diversified digital finance offerings from start-ups**
* Analog communication and transmission technology
* Digital banking solutions

4. In the paper "The Evolution of Fintech: A New Post-Crisis Paradigm" which was not included as on the five major areas of Fintech

* Finance and investment
* Operations and risk management
* Payments and infrastructure
* **Blockchain and online banking**
* Data security and monetization
* Customer interface

1. NumPy is a Python library that supports large multidimensional arrays and matrices.

* **True**
* False

2. NumPy is not efficient for manipulating data.

* True
* **False**

**Week3**

1. To express a connection between consumption and income, the formula would look like Consumption = f(Income).

* **True**
* False

2. Econometrics is the the branch of economics that \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* studies the behavior of individual economic agents in making economic decisions.
* deals with the performance, structure, behavior, and decision-making of an economy as a whole.
* applies mathematical methods to represent economic theories and solve economic problems.
* **develops and uses statistical methods for estimating economic relationships**.

3. Which is not an example of non-experimental data?

* Students are classified into two groups based on academic success for eligibility of a scholarship reward
* Survey of a nation's economic position
* **Data recorded to show values from an experiment with variables that are tested in control environment**
* Question responses are recorded and evaluated

4. Economists and other social scientists operate in a complicated environment where data on variables is "experimented" rather than "observed."

* True
* **False**

5. There is a systematic portion and an \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ in every econometric model.

* observable random component
* **unobservable random component**
* observable consistent component
* unobservable consistent component

1. Which is not an assumption of the Simple Linear Regression Model?

* The linear regression function returns the mean value of y for each value of x.
* The values of y are dispersed around their mean value for each value of x, using probability distributions with the same variance.
* **x is a random variable; it must take at least one value.**
* For any value of x, the values of y are normally distributed about their mean.

2. Any observation on the dependent variable y may be divided into two parts: a systematic component and a \_\_\_\_\_\_\_ component.

* independent
* **random**
* asytematic
* linear

3. To avoid huge positive distances from being negated by a big negative distances, the distances are \_\_\_\_\_\_\_\_\_.

* divided
* rounded
* **squared**
* estimated

4. SALES = β1 + β2PRICE + β3ADVERT - Which illustrates how SALES is influenced by PRICE and ADVERT (advertising)?

* β1
* β2
* β3
* **All of the above**

5. SALES = E(SALES) + e = β1 + β2PRICE + β3ADVERT + e - What does e stand for?

* constant error component
* **random error component**
* constant price component
* random price component

1. The Fama and French Three-Factor Model is what type of model.

* Option Pricing Model
* Leveraging Model
* **Asset Pricing Model**
* Consolidation Model

2. The goal of the CAPM is to assist the investor in guaranteeing that a stock will remain highly valued when its risk and the time value of money are comparable to the return.

* True
* **False**

3. To yield the Quick Ratio Formula, you must first total the cash, short-term marketable securities, and accounts receivable before diving it by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Current Equity
* **Current Liabilities**
* Current Assets
* Average Inventory

4. The CAPM would not be necessary if an investor could estimate the future return of stock with high accuracy.

* **True**
* False

5. Inventory Turnover Days and Inventory Turnover Ratio are examples of what type of Financial Ratio.

* Liquidity Ratio
* Profitability Ratio
* **Efficiency Ratio**
* None of the above

6. Equity Ratio is an example of what type of Financial Ratio.

* Profitability Ratio
* Efficiency Ratio
* Liquidity Ratio
* **Leverage Ratio**

7. Net income divided by the shareholder’s equity yields \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Return on Assets
* Gross Margin Formula
* **Return on Equity**
* Return on Capital Employed

1. Net Profit divided by Shareholder's Equity equals \_\_\_\_\_\_\_\_\_\_\_\_

* Return on Profits
* Return on Liability
* **Return on Equity**
* Return on Assets

2. What are the two policies used to implement financial market strategies?

* Operating and Investment
* **Dividend and Financing**
* Dividend and Operating
* Financing and Investment

3. Return on Sales is also known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_

* **Net Profit Margin**
* Net Profit Sales
* Net Profit Financing
* Asset Turnover

4. Analyzing the national economy or the unemployment rate of a country is what type of fundamental data?

* Microeconomic Fundamentals
* **Macroeconomic Fundamentals**

5. Which is not a category for a cash flow statement?

* Cash flow connected to financial statements
* **Cash flow related to adjustments**
* Cash flow related to investments
* Cash flow from operations

6. A firm's credit practices, payment policies, and projected sales growth all influence net working capital investments.

* **True**
* False

7. What financial analysis is a multi-factor model that measures the overall risk associated with security, relative to the market?

* Cash Flow Analysis
* **Barra Risk Factor Analysis**
* Cash Flow Analysis
* Fundamental Analysis

**Week4**

1. A financial model is:

* a prediction of what will happen during hypothetical market scenarios
* a standard fixed template applicable to any given business
* **a tool that forecasts a company's financial success in the future**

2. Which of the following are generally used to create a company’s financial model?

* **The income statement, balance sheet, cash flow statement, and supporting schedules**
* The number of employees, competitor analysis, and seasonal market contributors
* The sales and marketing costs, sales projections, and other future considerations

3. What is the most effective approach to financial modeling?

* Following what your competitors do
* **Practice**
* Buying the most recent software analysis platforms

4. What are the primary inputs to the 3 statement model?

* Inventory analysis, employee turnover statement, balance sheet
* **Cashflow statement, income statement, balance sheet**
* Cashflow statement, employee overhead analysis, income statement

1. A Monte Carlo simulation is:

* a computerized mathematical technique that allows people to plan for optimization of profit in qualitative analysis
* **a computerized mathematical technique that allows people to account for risk in quantitative analysis and decision-making**
* a manual computation technique that relies solely on the creation of pseudo-random number generation

2. The evolution of computer technology has removed which of the following barriers for Monte Carlo simulations:

* the ability to consistently account for all possible variables associated with risk
* the ability to visually plot the results of running the simulation
* **the ability to produce long sequences of random numbers**

3. Before having the projected cash flows, it is recommended to calculate a simple terminal value and discount most cash flows back to the present to get the DCF result.

* True
* **False**

1. What is the primary service provided by a robo-advisor:

* Use publicly available client data to recommend the best portfolio allocation and, when given permission, make investments on behalf of the client
* Automate ongoing administrative tasks on a customer’s portfolio according to a pre-defined schedule
* **Gather client information then apply machine learning and other data-driven techniques to either provide investment advice or automatically invest on behalf of the client**

2. A common application of risk analysis is:

* **To predict the credit-worthiness of an individual**
* To predict the long-term market cap of a particular stock
* To predict the best investment strategy depending on a given client’s risk tolerance

3. Machine learning can be applied to areas of fraud protection by:

* Analyzing the order the a particular portfolio of stocks were purchased
* **Deposit and withdrawal patterns that have historically been presented by money laundering activities**
* Predicting when a particular client's account may be hacked

4. Machine learning algorithms can be applied in customer retention to:

* **Predict when a client may be leaving your service for another provider**
* Predict the precise time when a customer may be moving away from a competitor
* Predict when a client's credit score may have changed

1. In the lesson, there were 4 financial modeling techniques to follow. Which of the following is not one of them discussed?

* Color Coding
* Assumption
* **Squared Reference**
* Historical Data

2. Guido van Rossum created Python and released it for the first time in 1995.

* True
* **False**

3. Which is not a misconception about Python in Financial Modeling?

* It doesn't have a compiler like other languages.
* It doesn't support concurrency.
* It is perceived to be very slow.
* **None of the above.**

4. \_\_\_\_\_\_\_\_\_can be used to quickly load data from Excel spreadsheets into SQL databases.

* Jupyter Notebook
* **Pandas Library**
* Xlwings

**Week5**

1. Which is not a consideration in regards to trend following?

* **Asset price difference between exchanges**
* Money management
* Diversification
* Risk control

2. A strategy that is bottom-up, beta-neutral in approach and uses statistical/econometric techniques to provide signals for execution is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Diversification
* Designated Market Maker
* **StatArb**
* Mean Reversion

3. The average size of a bond trade tends to be substantially greater than for an equity trade.

* **True**
* False

4. What type of investment is a financial asset that does not fall into one of the conventional investment categories?

* Annuities
* Currencies
* **Alternative**
* Bonds

5. Traders who believe that current or past price action in the market is the most reliable indicator of future price action are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Functional
* **Technical**
* Sentiment
* None of the above

6. What type of market is where financial instruments are traded for immediate delivery?

* Money Market
* **Spot Market**
* Futures
* CFD Market

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ can be defined as the level of correlation in a forecast with returns realized.

* Return
* Breadth
* Diversification
* **Information Coefficient**

2. Which ratio is used to help measure portfolio returns beyond the returns of a benchmark?

* Standard Deviation
* Treynor Ratio
* Sharpe Ratio
* **Information Ratio**

3. Automated trading, black-box trading and algo-trading are also called what \_\_\_\_\_\_\_\_\_\_\_\_\_.

* API Trading
* Asset Trading
* Diversified Trading
* **Algorithmic Trading**

4. Discretionary trading removes all human emotions from the process of trading.

* True
* **False**

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a portfolio measures how much the investment returns deviate from the mean of the probability of investments.

* Treynor Measure
* Sharpe Ratio
* **Standard Deviation**
* Jensen Ratio

1. Who can benefit from API Trading?

* Investors
* Students
* Traders
* **Anyone interested in trading**

2. Interface, Orchestration and Connectivity are three components of what?

* APIs
* Algorithmic databases
* **API-led connectivity**
* Point of Sale systems

3. Before the introduction of \_\_\_\_\_\_\_ in 2016, banks could keep their data and information hidden from the public.

* PS2
* API
* **PSD2**
* GDPR

4. APIs must expose the data or the service as it is in the system.

* True
* **False**

5. The evolution of financial technology has seen the rise of \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ technologies that can extract financial insights from massive datasets.

* Mixed Reality
* FinTech Banking
* Diversified Transaction
* **Artificial Intelligence**

1. Which is not a key feature of algorithmic trading software?

* Connectivity to various markets
* **Platform-dependent programming**
* Functionality to write custom programs
* Configurability and Customization

2. Backtesting simulation involves testing a trading strategy on \_\_\_\_\_\_\_\_\_\_\_\_data.

* Current
* Latency
* **Historical**
* None of the above

3. In the lesson it was discussed if you were planning to build your own system, a good service to explore algorithmic trading is \_\_\_\_\_\_\_\_\_\_\_.

* CloudQuant
* Quantra
* Algovest
* **Quantopian**