1- **Bena, Erel, Wang, and Weisbach (2021) study the patents of the target companies before and after an acquisition/merger. They find that the patents of the target company become more similar to those of the acquiring company after the merger.**

   a. **Consider the three types of mergers. Which of these three types explains Bena et al.'s findings?**
   Vertical merger.

   b. **Describe the problem that the merger is supposed to solve. How does the merger solve the problem?**
   This merger is supposed to solve the hold-up problem. The merger solves the problem by making sure that the target company does not experience a problem in selling its product to the acquiring company, as both of these companies operate under the same company.

   c. **What do you expect to see for the target, acquirer, and combined returns after this type of merger?**
   Positive returns for the target company, nonnegative returns for the acquiring company, and positive combined returns.

2- **Bach, Baghai, Bos, and Silva (2023) study the effects of mergers on the mental health of the employees of both target and acquiring companies. They find that employees experience more stress, anxiety, and depression after the mergers.**

   a. **Consider the seven theories we covered during the lecture. Which of these seven theories provides an explanation for the findings of Bach et al.?**
   Breach of trust.

   b. **According to the theory that explains the findings of Bach et al. (2023), what are the expected returns for the target's shareholders, the acquiring company's shareholders, and the combined return of the target and acquirer's shareholders?**
   The breach of trust theory predicts positive target and combined returns and nonnegative bidder returns. Yet, these returns are made at the expense of other stakeholders.

   c. **Suppose that you want to understand whether mergers and acquisitions are welfare-improving for the whole society. What do the findings of Bach et al. (2023) tell us about the welfare implications of mergers and acquisitions? Is looking at shareholders' returns sufficient to understand these welfare implications? Briefly explain your reasoning.**
   These findings indicate that only looking at shareholders' returns is not enough to estimate the total welfare effects. These findings tell us that even though the shareholders may have positive returns, other stakeholders, such as employees, may expserience negative outcomes. A welfare analysis should consider both the shareholders and all other stakeholders.

3- **Suppose that you are the manager of a company and you want to do an acquisition.**

   a. **What are the two main methods of payment for this acquisition**? (2 pts)
   Cash and stocks.

   b. **According to the empirical findings, which of these methods is more likely to generate a higher return for you? Explain your reasoning briefly.** (4 pts)

Cash. The market does not know the true value of the bidder company. By offering a cash payment, the bidder reduces asymmetric information and signals that it is of high quality.

c. **Suppose that another offer is made to your target company. How do you expect this offer to influence your own returns? (4 pts)**
   The existence of multiple bidders can reduce the bidder returns. Therefore, the other offer is expected to reduce my returns.
d. **Now, suppose that a researcher wants to calculate the returns for this case. How should the existence of multiple offers influence the event window? Why? (5 pts)**
   The researcher should use a longer event window. The reason is that the existence of multiple offers cannot be predicted right after the first offer. Therefore, a short event duration cannot capture the effect of multiple offers.

4- Name and describe the economic mechanism of two theories of mergers that are consistent with the return patterns you observe below.
Target Return: Positive 44.27% ***and statistically significant***
Acquirer Return: Nonnegative -1.58% ***but not significant***
Combined Returns: Positive 11.50% ***and statistically significant***

<u>*Answer:*</u> *(other theories possible)*

1) ***Breach of trust (****Shleifer and Summers (1988)): The goal of the merger/takeover is to breach implicit contracts with stakeholders. A firm is a nexus of contracts with stakeholders. Stakeholders include: Employees, Suppliers, Creditors and Government. Many of these contracts are implicit since the contracting world is extremely complex. After a merger/takeover many of these implicit contracts can be reneged. Wages may be cut (managers may have verbally promised wage increases). Risk of the firm may be increased (debt will lose value). Suppliers that have been loyal to the firm may be substituted for more "efficient" suppliers. This means the total gain to shareholders is positive (others lose). Target shareholders will have a positive return. Acquiring shareholders will have a nonnegative return. Other stakeholders will lose.*
2) ***Scale Economies.*** *Technical and engineering relations e.g. number of clicks and server space. Larger firm size implies that workers can specialize in tasks (Adam Smith). Economies of Scope: Having more than one internet service leads to economies of scope because experience and marketing utilization. The effect on combined returns (to target and acquiring shareholders) will be positive.* ***Target shareholders will not lose (positive returns)*** *otherwise they would not sell. Acquiring shareholder should not lose* ***(nonnegative returns)*** *- otherwise they would not buy. The* ***positive total gains*** *are split among target and acquiring shareholders.*