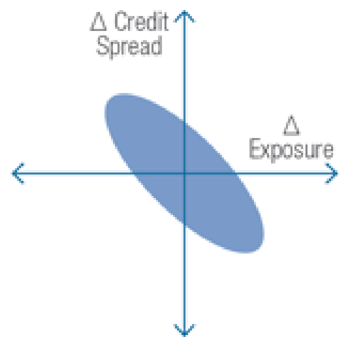
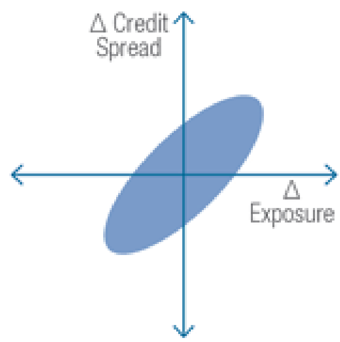
LRM Practice Questions

TIA Practice Question (6 points = 18 minutes)

(a) (1 point) Consider the graph below. Is this an example of right-way or wrong-way risk?



(b) (1 point) Consider the graph below. Is this an example of right-way or wrong-way risk?



(c) (1 point) Analyze the following statement:

> Over-the-counter (OTC) and exchange traded contracts have similar counterparty credit risk.

(d) (1 point) Consider a forward contract with a gold producer in which the bank pays the spot price of gold and receives a fixed price. Is this an example of right-way risk or wrong-way risk for the bank?

(e) (2 points) A BBB zero bond is purchased. Suppose that PFE(α) is analyzed, and the value of α is increased. Et ceteris paribus, in what direction would you expect each of the following quantities to move?

   (i) Gains

   (ii) Exposure

   (iii) Yield to Maturity

TIA Practice Solution (6 points = 18 minutes)

(a) (1 point) Consider the graph below. Is this an example of right-way or wrong-way risk?

- Right-way risk. When exposure increases, credit spreads decrease and credit quality increases.

(b) (1 point) Consider the graph below. Is this an example of right-way or wrong-way risk?

- Wrong-way risk.

(c) (1 point) Analyze the following statement:

Over-the-counter (OTC) and exchange traded contracts have similar counterparty credit risk.

- **Solution:**
- False. Only contracts that are privately negotiated between counterparties, i.e. over-the-counter (OTC) derivatives, are subject to counterparty credit risk. Contracts that are traded on an exchange are not affected by counterparty risk, because the exchange guarantees the cash flows promised by the derivative to the counterparties.

(d) (1 point) Consider a forward contract with a gold producer in which the bank pays the spot price of gold and receives a fixed price. Is this an example of right-way risk or wrong-way risk for the bank?

- **Solution:**
- Wrong-way risk. Suppose the price of gold were to decrease. That would worsen the credit quality of the gold producer, since their revenues would decrease, making their business less profitable and viable. It would also increase the value of the forward contract to the bank, since the bank is paying the spot price; therefore, the bank's exposure would increase. Therefore, credit quality is down when exposure is up. This is wrong-way risk.

(e) (2 points) A BBB zero bond is purchased. Suppose that PFE(α) is analyzed, and the value of α is increased. Et ceteris paribus, in what direction would you expect each of the following quantities to move?

(i) Gains

(ii) Exposure

(iii) Yield to Maturity

- **Solution:**
- The correct answer is an increase for (i) and (ii), and a decrease for (iii).
- As α increases, the value of PFE increases. This corresponds to higher exposure. Since the bond was purchased, this also means that it has a higher value and so there would be larger gains. Therefore, (i) and (ii) are both increased.
- If the bond has a higher value, the YTM is expected to decrease for (iii).

