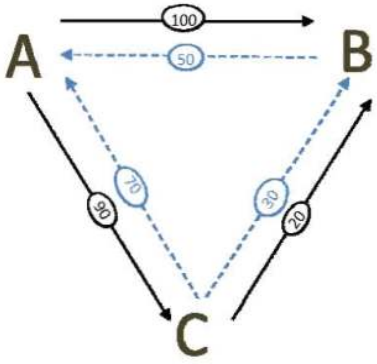
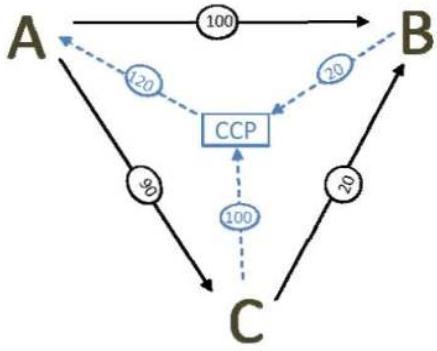
Assignment of Session 6:

1. The following example illustrates that CCP can sometimes make matters worse than better. Suppose there are three market participants and one CCP. The exposures represented by the dotted lines are standard transactions that can be cleared centrally. Those represented by solid line are non-standard transactions that cannot be cleared centrally. For example, in party B's dealing with A, the nonstandard OTC transactions are worth 100 to B and -100 to A; the standard OTC transactons are worth +50 to A and -50 to B. Note that netting is done with EACH counterparty.





Dealer	Exposure after bilateral netting
A	0
B	100
C	20
Ave	40

Dealer	Exposure after netting incl. CCP	Exposure after netting excl. CCP
A	120	0
B	120	120
C	90	90
Ave	110	70

In the figure above, suppose that an extra standard transaction between A and C which is worth 160 to A can be cleared *through the CCP*. What effect does this have on the tables in the figure?

2. Suppose that the spread between the yield on a three-year riskless zero-coupon bond and a three-year zero-coupon bond issued by a bank is 210 basis points. Assume that the Black-Scholes–Merton model is a good model for option pricing. The Black-Scholes–Merton price of an option is $4.10. If you buy this option from the bank, will you pay a price higher, equal to, or lower than $4.10? Explain why. (You do not need to compute exactly how much you are going to pay.)

3. Explain very briefly the difference between Vasicek's model, the Credit Risk Plus Model, and CreditMetrics as far as the following are concerned: (a) When a credit loss is recognized and (b) the way in which default correlation is modeled