**Data Model Extension: Stock Market Tables**

You are going to extend the simple brokers entity relationship diagram from Exercise 2b to include information about stock trades. Add the following to the existing stock\_exchange, broker, broker\_stock\_ex, company, and place tables:

The company table has a company\_id and a company name but you need to add a column for stock id. Some companies have a stock id, which is a number that us unique throughout the world.

A company must be listed on a stock exchange in order to be traded at that exchange. Companies can list on several stock exchanges, with a different stock ticker symbol at each exchange. This is known as cross listing. A company's stock however, is uniquely identified throughout the world by its unique stock identifier. People can buy shares on one stock exchange and sell them on another exchange. This is called arbitrage. The database must be able to track these types of trades across exchanges.

A stock exchange conducts all trading in one particular currency. You need to track stock trades on exchanges all over the world, so please track the names and symbols of the currencies used by the stock exchanges. You also need to keep track of monetary exchange rates. These rates vary with time but we will simplify the data model and assume that exchange rates are constant.

In this simplified trading system, the price per share of a stock changes only once in a trading day. Be sure to track the daily stock price for each stock id at each stock exchange where it is traded, in the currency of the exchange.

For all trades, keep track of the id for the broker who made the trade, the stock exchange where the trade occurred, the date and time of the transaction, how many shares were traded, and the total price of the trade. This total price is calculated by another computer system and is equal to the value of the shares traded \* daily price per share + broker's commission. Trade rows must be uniquely identified by a trade id. In this simplified data model, we are not tracking purchasers and sellers.