1. Delivery Versus Payment (DVP) is the system that use third parties such as banks and clearing house to help manage the financial securities’ delivery. In this work flow all transactions will need to go through a long process involve many parties to verify the correctness of the data so usually the settlement date might be 2 or 3 days (T + 2, T + 3) after the exchange payment happened. In this system bank or clearing houses will act as Custodian of investors to guarantee that all investors will be received what they already paid for or get all the payment that they supposed to get no matter who are on the other side of an exchange process.

Blockchain-based system on the other hand do not need third parties on the settlement process since the system itself do not centralize any transaction, so every transaction is public to every user on the system. It is impossible to edit or make an invalid transaction since you will need to edit more than 51% of the record of every users in the system before the new transaction begin (which is almost impossible for the real-world transaction). So, without going through multiple parties for many verifications the settlement process could be a lot faster and cheaper on the same time compare to the traditional DVP flow.

For the corporate action processes of DVP, all need information is manually extracted from the source and after that a third party still need to serialize all the data in order to have a correct calculation when the corporate decide to take actions. With this flow the level of automation are low and errors rate is quite high all this lead be an inefficient process.

On the other hand, since data inside blockchain is already valid could be trusted without a complicated verification needed (Since everyone have the same public ledger). So, the process will be more efficient by nature because all involved parties will get a trusted information faster.

Even the concept of DVP and Blockchain is completely different but they still have some similarities in term of securities movement anyway. With DVP, it is obvious that third party such as bank will not only verify transactions but also help deriver securities as well. For Blockchain by concept it might look like all third parties is not needed at all on the process, but in the real world, Blockchain system still need a third party to act as a custodian in order to protect and deliver some type of securities such as electronic contracts or real world certificates. Since by concept Blockchain was designed to put only small data inside each transaction not big documents. With this limitation third parties still need on both systems anyway.

Actually DLT-based services are not a new thing in the IT industry, Blockchain is one of the technologies that using DLT- based services as well. If you look at the concept of Blockchain it sounds really interesting since the transaction fees is a lot cheaper than the traditional centralized system and also faster process with better accuracy as well (since no one can edit the data inside the Blockchain system). But why the traditional centralized transaction system is still existing and dominate the financial securities sector until now?

One of the main problems with Blockchain is that the data of the whole public ledger could be really huge (Bitcoin have 303GB in Q3 of 2020) since every users will be able to hold the public ledger that mean, if you make a system that contain a big Blockchain data, you will have to pay big number for the storage (cloud or physical) even though each transaction cost is cheaper but the overall cost of system might not since the storage’s cost is getting bigger every day. Some people said that **peer-to-peer** network could solve this issue, since each user will be responsible for the storage by themselves. But from my perspective, for the normal not IT users, setting up **peer-to-pee**r network in their personal computer is too much effort needed.

As long as we still cannot solve the problem of DLT based services. We still need to balance usage of both of the systems to match our requirements and make better experiences for users in the system.