



SUN ZU Lab

What is Prime Brokerage?

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March 1st 2021

And how does it apply to digital assets?

EDUCATION PAPER

There is a lot of talk in the crypto economy about prime brokerage: many participants frame themselves as "prime brokers" (PB), with the usual superlatives. What exactly are we talking about? A broker is an intermediary between a buyer and a seller: for a multitude of reasons despite the costs involved, it often makes sense to "intermediate" a transaction. This is the case for corporate mergers & acquisitions, real estate, a large fraction of products in capital markets, auctioning art, etc. But what are the prime services offered by a broker beyond execution (i.e. the matching of buyer and seller)?

In traditional finance, prime services include the following:

- *enhanced execution services*: those may be for example access to a low latency environment, co-location at an exchange data center, custom-made trading algorithms that may not be widely available to the broker's client base, etc. In some instances, a PB might even allow a client to trade under the broker's membership for better performance and/or lower costs.
- *custody of assets*: this is fairly customary, most broker-dealers offer custody services as part of an integrated solution (but sometimes using a distinct legal entity). Client accounts may be co-mingled (all in the same place) or segregated (in individual accounts). Co-mingling assets is practical and cost-effective for the PB (for example for settlement and delivery) but presents an element of risk for the client (in 2008 some of Lehman clients discovered that their assets were not segregated. As a result their claims was much harder to enforce in the liquidation proceedings). Segregation dramatically facilitates property claims in case of default but is regulatory and operationally more costly.
- *operations*: commonly referred to as "back-office". A PB will make its back office available to address the settlement needs of its clients, from basic cash and derivative settlement to OTC reconciliation, margining, and corporate actions. Back-office operations are a very tedious universe. While many operations are "straight-through", a lot of situations arise that need manual intervention. A PB will essentially allow an investment fund to outsource all its "ops" department, thereby significantly reducing its fixed-cost base.
- *portfolio valuation*: third-party valuation is a basic requirement in the world of asset management. PBs fulfill that need for their risk monitoring requirements but also the benefit of final investors.



- *funding (i.e. secured lending)*: that's a big one. A lot of asset managers, especially speculative hedge funds, employ leverage. The principle is quite simple: the fund borrows money to buy assets, those assets are then deposited as a guarantee against the loan. The interest rate paid for this loan reflects the type of assets, their liquidity, and naturally includes a commercial margin that is client-specific. Funding is a very important part of a PB revenue mix because of its diversifying nature. Execution is a transactional business: no trade, no gain. Funding is an accrual stream: the simple carry of a position brings revenues day after day until the position is unwound.
- *short-covering*: for a portfolio manager trying to gain a short exposure in the market, the pre-requisite is finding the right instrument to build this exposure. Today "naked short-selling" -i.e. the sale of an instrument without having secured the possibility to deliver- is mostly forbidden. For example, a stock cannot be sold short if it hasn't been "located" to borrow prior to the sale. Being able to locate inventory at a fair price is a critical competitive advantage for PB. A client can naturally request a locate from intermediaries other than its regular PB, but the cost is most certainly higher and practicalities can be tricky (on-time settlement for example).
- *regulatory reporting*: not much to detail here. The trend is towards more of this, outsourcing this function is a no-brainer for many clients.
- *risk management and reporting*: risk management is naturally a function of each client's strategy and mandate. There are three reasons however why PBs have stringent risk management practices in place: i/ they need to make sure that they can survive a client's default, and if possible even anticipate it so that market-wide damage is minimal; ii/ in the presence of leverage, there is a credit element to risk management: a sudden market drop could result in dramatic losses because of leverage; iii/ regulators impose it, implicitly as a way to overlay a third-party risk monitoring layer. Many hedge funds are unregulated: final investors and regulators can find reassurance in the fact that well-established PBs keep a close eye on their risk engagements.
- *fundraising*: because of their extensive connections with final investors, institutional and otherwise, PBs routinely help their clients find new money.
- *synthetic format*: prime brokerage was historically a cash business i.e. clients would physically buy and detain the assets. With the development of derivatives, a new format emerged: "synthetic prime



brokerage". In a synthetic arrangement, the client doesn't hold the assets. Those are on the PB's balance sheet and the client holds a derivative that mirrors the portfolio's exposure-it usually takes the form of a total-return swap (TRS). The synthetic format offers many advantages from a client standpoint, in particular its simplicity. However, this simplicity comes with an additional layer of legal complexity due to the fact that a derivative product is involved.

Now, what about the crypto space? Are prime brokers there close to providing prime services to their clients? Not by a long stretch. One could argue that there are in fact only very few true prime brokers for digital assets. Some functions are highly relevant (e.g. execution), some don't even have an equivalent, for example regulatory reporting which is non-existent (today).

The most fundamental interrogation is this: do digital assets possess intrinsic characteristics that would prevent nascent digital capital markets to grow and converge towards their cousins on traditional instruments? Well, at SUN ZU Lab we don't think so, quite the contrary. In principle, we think digital assets have tremendous potential to equal and even surpass some traditional assets. With two caveats:

- the industry needs to aggressively embrace self-discipline if not self-regulation: conflicts of interest are widespread, opacity is the rule not the exception. Embracing self-regulation will promote cooperation and contribute to forging a common vision. In turn this vision will help consolidate relevant technologies, and forge a path to much needed standardization.
- market participants need to make peace with traditional regulation. Not all of it is relevant or applicable, but regulators worldwide care about only one thing: protecting investors, especially non-professional ones. The digital asset industry need to recognize this fact and make it its mission to help.

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