



Proprietary trading

- Investment banks have employees whose sole role it is to trade securities in markets with the aim of making profits from this trading activity.
- This activity is often referred to as the 'trading desk' or 'proprietary trading'.
- Traders use funds of the investment bank and any profits or losses they make are accruing to the investment bank.
- Proprietary trading contributes often a significant amount to the profits of the investment bank and in most investment banks its is a highly
  profitable activity.
- We will look at the incentives for investment banks to invest into the expertise of their traders, how traders are remunerated and the
  incentives they have to report higher profits than they actually generated.

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- The profits investment banks make from properitary trading, that is trading on their own account rather than facilitating client trades in brokerage or providing liquidity through market making, are substantial and while variable, can be found in market of all characteristics.
- ► The informational advantage investment banks ave from their involvement with companies in their other business areas allows them to make profits also from trading as they will often have better information and be able to put the information better into context than other market participants. In addition, investment banks often have a substantial capital base that can be used make the short-term investments into securities markets.
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    - Investment banks are very active in derivatives markets, often engaging in arbitrage to exploit differences between the value of a derivative and its quoted price.
    - Some investment banks are also active in the trading of various cryptoassets, although in most cases the activity in this market is quite limited.

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- → It is therefore that proprietary trading gives rise to a number of interesting questions and conflicts of interest, some of which we will address here.

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- → Knowledge and skills are essential for traders to generate profits from trading, we will here look at incentives to acquire such expertise.
- Information is a key element to generate any profits in markets. it is not sufficient to know that a market is inefficient and that there are profitable trading strategies, a trader needs to have the information on who to exploit any informational efficiencies.
- Acquiring such expertise will be costly in terms of accessing the relevant information, but also the acquisition of the skills through training and practice.

  These costs will have to be balanced against the profits a trader can generate and this will lead to the optimal level of expertise a trader acquires.
- ▶ We will therefore look at the optimal level of expertise by traders and focus in particular on the impact that competition from traders in other investment banks has on the level of expertise.
- → We will see how competition with other investment banks leads to an arms race of expertise that leads to levels of expertise that are too high.

- ▶ In order to generate profits from trading, traders need to be informed
- The costs of acquiring and processing information has to be balanced against its benefits of generating profits
- We will investigate how much investment banks should invest into acquiring expertise

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→ The model we are going to discuss is based on Chapter 15.1 of the book 'Theoretical Foundations of Investment Banking'. A more detailed description of the model, additional steps for its solution, and a more in-depth discussion of results can be found there.

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Proprietary trading
Slide 5

- → Now that we have derived the main results of the model, as far as relevant for us, we will briefly discuss some implications as well as limitations of this model. This will allow us to interpret the model in its context of the initial problem and enables us to apply it appropriately in a realistic context.
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- → We thus see that individual rationality requires a higher level of expertise than is socially desirable.

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  - It is very common in investment banks that traders are relying on a bonus payment for the majority of their income; the base wage that is
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    - This bonus will commonly be based on his own trading performance and the profitability of his division or the investment bank as a whole will
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- Paying traders a too high wage or even a too high share of the profits they generate may make proprietary trading unprofitable, once other costs are taken into account. Such costs might be losses of other traders, who need to be covered even if these traders do not receive a bonus. It is uncommon for traders generating losses to have to repay the investment bank some of these losses, although sometimes clawback clauses might allow some degree of 'negative bonuses'.
- ▶ We will look at when proprietary trading is profitable and whether the use of bonuses is preferred over the use of a fixed wage.
- $\rightarrow$  We will now look at a model that allows us to evaluate why boni to traders are preferred by investment banks over paying a fixed wage.

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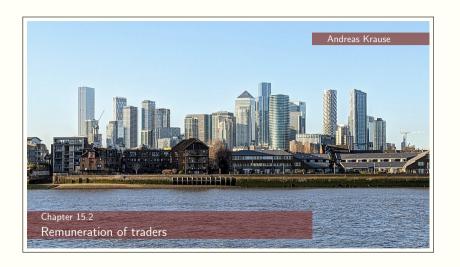
# Bonus culture in trading

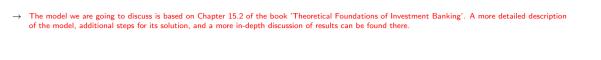
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Copyright (C) 2024 by Andreas Krause Proprietary trading

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- → Given the importance of trading profits for the remuneration of traders, it can be suggested that traders might seek to manipulate their trading profits in order to obtain larger boni. We will look into these incentives and how monitoring of traders can be used to reduce these incentives.
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→ The model we are going to discuss is based on Chapter 15.3 of the book 'Theoretical Foundations of Investment Banking'. A more detailed description of the model, additional steps for its solution, and a more in-depth discussion of results can be found there.

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    - and as everyone benefits from the higher trading profits (until they are shown to be fictitious) that are declared, the incentives to monitor traders with the aim of reducing this practice are weak.
- → Proprietary trading is highly profitable for investment banks, but our results suggest that at least some of these profits are questionable and the resources put into the expertise of traders is higher than socially desirable.

- ► Investment banks will engage in proprietary trading only if the possible informational advantage is sufficiently high
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    - and as everyone benefits from the higher trading profits (until they are shown to be fictitious) that are declared, the incentives to monitor traders with the aim of reducing this practice are weak.
- → Proprietary trading is highly profitable for investment banks, but our results suggest that at least some of these profits are questionable and the resources put into the expertise of traders is higher than socially desirable.

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- ► Traders in investment banks overinvest into their expertise
- ▶ Unless investment banks can identify the quality of their traders precisely, they will remunerate traders through bonuses
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