

A panoramic view of a city skyline, likely New York City, featuring a mix of modern glass skyscrapers and older brick buildings along a waterfront. The water is in the foreground, and the sky is clear and blue.

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Chapter 17.1

Viability of partnerships

Outline

- Problem and model assumptions
- Associates joining the partnership
- Taking up partnership offers
- Not appointing unskilled partners
- Mentoring of associates
- Summary

- Traditionally, investment banks have been organised as partnerships. In a partnership, the senior managers of the investment bank would also be the equity holders; there are no other equity holders besides senior managers.
- Employees of the investment bank may be offered partnerships once they reach a certain level of seniority; to enter the partnership they then have to make an investment into the investment bank that is representing the value of the equity stake they obtain.
- If a partner resigns from working for the investment bank or retires, he will return his equity stake to the investment bank and be paid the value of his stake.
- Such partnership, once the standard organisational form for investment banks is nowadays only retained by a small number of boutique investment banks; once of the last major investment bank to forego its partnership status and to incorporate with external shareholders was Goldman Sachs in 1999.
- We will investigate why partnerships are no longer widespread, what the implications are, but also how investment banks seek to retain some of the benefits of partnerships.

- We will look at the different stages in a future partner's career at an investment from the joining of a partnership to becoming a partner, and then to appointing new partners.
- For each step will look at the requirements for the (future) partner to accept each subsequent step in his career.

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- We will first characterise partnerships more precisely and set up the details of the model we consider.

Characteristics of partnerships

- ▶ Investment banks were traditionally organised as partnerships
- ▶ The owners are actively engaged in the business, they are called partners
- ▶ New partners are appointed from existing employees, called associates
- ▶ New partner buy a stake in the company and if they leave, sell it to a newly appointed partner

, commercial banks quickly become incorporated. Partnership survive to this day in many management consultancy firms, accountancy firms, and law firms, while investment banks have mostly been incorporated in the second half of the 20th century.

Characteristics of partnerships

- We will first look at some key properties of partnerships.
- ▶ As mentioned, the traditional organisational form of investment banks is that of a partnership. Partnerships were a common organisational form also for commercial banks, but once legal restrictions on the legal status of banks become liberalised in the mid 19th
- ▶
 - In a partnership, the owners (equity holders) are actively engaged in the running of the business in the form of senior managers of the investment bank.
 - Such senior employees are typically called 'partners'.
- ▶
 - In most cases, new partners are appointed from existing employees, although external appointments directly to a partnership is possible and in some cases also observed.
 - Employees that are on a career path that may result in them becoming partners are called 'associates'.
- ▶
 - A new partner buys a stake in the investment bank, often financed through a loan; this loan in many instances would be given by the investment bank itself.
 - If a partner leaves the investment bank, either to join a different organisation or to retire, the investment bank buys back their equity stake, and potentially offers it to a new partner.
- Thus partnerships are closest to the owner-manager ideal of many economic models of companies in which there is no separation between the owners (equity holders, shareholders) of a company and the managers of the company.

Mentoring associates

- ▶ Partners can be either highly-skilled, generating surplus V_H , or low-skilled, generating surplus V_L
- ▶ A partnership has M partners
- ▶ Each partner mentors N associates, who might become partners, but until then only generate surplus V_L
- ▶ Mentoring costs C and partners do not know the type of partner an associate will be without mentoring
- ▶ Profits to a partner consists of his own surplus V_H and the surplus V_L of all associates he mentors, less the wages they are paid
- ▶ $\Pi_P = V_H + N (V_L - w_A)$

- We now set out the essence of the model, including how partners and associates interact.
 - ▶
 - We have partners that are either generating a high surplus
 - or they generate a low surplus. Which type they are is not immediately clear to any observer, but the manager himself knows his own type.
 - ▶ The investment bank has a fixed number of partners.
 - ▶
 - Each of these partners mentors a set number of associates, who might become partners on promotion.
 - Until such promotion, each associate only generates the low surplus; this might be justified that even if they are highly skilled, they are not in a position to show their ability fully given their limited responsibilities.
 - ▶
 - Mentoring is costly to partners,
 - but through mentoring their associates, they learn their type. Without mentoring, partners would not know the type of associates, thus whether he will become a partner generating a high or low surplus; only through mentoring will he learn this information.
 - ▶
 - Assuming all partners have equal stake in the investment bank, they will divide profits equally. Assuming for now that partners are all highly skilled, he will be able to retain the high surplus he generates.
 - In addition he will obtain the surplus of each of the associates he mentors, less the wages these associates are paid.
 - ▶ *Formula*
- We will now continue to determine the incentives of an employee throughout his a career at this investment bank.

- Problem and model assumptions
- **Associates joining the partnership**
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- The first decision an employee has to make is whether to join a partnership and potentially become a partner, or whether to join an incorporated investment bank, where no partnership is possible.

Profits of joining a partnership

- ▶ Associates do not know if they are highly skilled and chosen as partners, they assign probability $\frac{1}{N}$ to this
- ▶ If appointed as partner, they obtain their initial wage and in the next time period the profits of being a partner, less the mentoring costs
- ▶ If not appointed as partner, they obtain their initial wage and in the next time period gets paid his contribution
- ▶ $\frac{1}{N} \left(w_A + \frac{\Pi_P - C}{\rho} \right) + \left(1 - \frac{1}{N} \right) \left(w_A + \frac{V_L}{\rho} \right) \geq V_L + \frac{V_L}{\rho}$
- ▶ If not joining the partnership, they obtain their contribution in the current and next time period
- ▶ They join the partnership if this is more profitable

Profits of joining a partnership

- We now look at the profits an employee would make when joining a partnership an associate.
- ▶
 - We assume that being at the start of his career, the potential associate does not know whether he is highly skilled or not.
 - Knowing that they are one of N associates their partner mentors, they assign a probability of $\frac{1}{N}$ to being promoted to partner and this is equated with the probability of being highly skilled.
 - ▶
 - We now consider the case where the associate is appointed partner.
 - He would obtain his initial wage in the first time period.
 - Subsequently he is appointed partner and will obtain the profits from the partnership in perpetuity. We use a discount rate ρ for future profits.
 - However, from these profits of the partnership, we will have to deduct the cost of mentoring future partners. Even if the partner leaves after a certain period of time, he would sell his stake in the investment bank and obtain its full value, which is the present value of future profits to the partner.
 - ▶
 - We now consider the case where the associate is not appointed partner.
 - Again, he would obtain his wage in the first time period.
 - As he is not appointed partner, we assume that afterwards he is paid the low surplus which he generates in perpetuity.
 - ▶ *Formula*
 - ▶ These payments from joining the partnership need to be compared with the payment when not joining the partnership. In this case we assume that the employee of an incorporated investment bank will obtain the value of the low surplus the employee generates in the first time period and in perpetuity thereafter.
 - ▶ If the total payments of joining the partnership are higher than the alternative of joining an incorporated investment bank, he will do so.
- We can now determine the condition under which the employee will join the partnership as an associate.

Decision to join

- ▶ Associates join the partnership if $w_A \geq V_L - \frac{(V_H - V_L) - C}{N(\rho - 1)}$
- ▶ If $C \leq C^* = V_H - V_L (1 + (\rho - 1) N)$, we can set $w_A = 0$
- ▶ If mentoring costs are not too high, the benefits from being a future partner are sufficiently high for associates to forego any remuneration
- ▶ This is feasible if $C^* \geq 0$, or $\frac{V_H}{V_L} \geq 1 + (\rho - 1) N$
- ▶ The surplus generated by highly-skilled partners have to be sufficiently high

- We will derive the condition that will entice an employee to choose becoming an associate in a partnership rather than joining an incorporated investment bank.
- ▶ The condition for joining the partnership can be transformed into this *formula*, if also inserting for the profits of the partnership, Π_P .
- ▶ This condition becomes only a restriction if the left-hand side is positive; if the left-hand side is negative, which is fulfilled if the monitoring costs are sufficiently small, then the partnership can set the wages of associates at zero and they would still join the partnership.
- ▶ Assuming mentoring costs are not too high, the high future pay from the profits of the partnership makes a partnership more attractive than joining an incorporated investment bank, or a pathway that does not lead to associate status. Thus an associate is willing to forego pay at the early stage in their career if the future profits they generate if appointed partner are sufficiently high.
- ▶
 - For a feasible solution on the maximum mentoring costs, we need that this threshold for this costs is positive.
 - This requires that the difference between the pay associates earn at an incorporated investment bank or when not appointed partner, must be much smaller than the surplus a highly-skilled partner generates.
- ▶ In other words, the surplus generated by partners must be sufficiently high for partnerships to attract associates.
- Having established the condition under which an associate join a partnership, and assuming this is fulfilled, we now consider whether an associate would accept becoming a partner, if offered this opportunity.

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- The condition to become an associate implicitly had assumed that an associate offered a partnership would accept this offer. We will now investigate the decisions on which this is actually the case to show that our implicit assumption in the previous step was well justified.

Value of partnership

- ▶ Partners are paid wages w_P , reducing the profits of the partnership
- ▶ Associates are paid $w_A = 0$
- ▶ Profits of the partnership is then $\hat{\Pi}_B = \Pi_B - w_P = V_H + NV_L - w_P$
- ▶ These profits accrue in perpetuity, hence the value of the partnership is
$$P^* = \frac{V_H + NV_L - w_P}{\rho - 1}$$

- We first will determine the value of a partnership under the assumption that a highly-skilled associate joins the partnership.
 - ▶
 - Let us assume that partnership pay their partners a fixed wage.
 - This wage is paid out of the profits the partnership makes.
 - ▶ We have established above that associates are not paid any wages, provided the mentoring costs are sufficiently low.
 - ▶ Inserting from above we get the profits of the partnership as given in the *formula*.
 - ▶
 - These profits are made in every time period
 - and the value is then the present value of all of these future profits.
- We can now continue to assess the payments an associate would obtain if not joining the partnership.

Payment if partnership is refused

- ▶ Associates not appointed partners join the job market, there will be $M(N - 1)$ unskilled associates generating V_L each
- ▶ If a highly-skilled associate rejects the partnership, he will generate V_H and the number of former associates in the market is $M(N - 1) + 1$
- ▶ Average surplus is then $\frac{M(N-1)V_L + V_H}{M(N-1) + 1}$, former associates can earn this wage outside the partnership

Payment if partnership is refused

- We will look at the payment that is obtained by an associate that is rejecting the offer to become a partner.
 - ▶
 - If an associate rejects the offer of becoming a partner he will join the group of associates who have not received an offer.
 - Each of the unskilled associates that have not been made an offer to become partner, will generate the low surplus each.
 - ▶
 - The highly-skilled associate rejecting the offer to become a partner will generate the high surplus.
 - In total there will now be one additional employee in the job market.
 - ▶
 - The total surplus the employees together generate will be the surplus generated by the unskilled employees not having been made an offer to become partner, and the high surplus from highly-skilled employee who has rejected this offer. This surplus is generated by the total of the unskilled and the single highly-skilled employee.
 - Other employers cannot distinguish the types of employees, so everyone will be paid the average surplus they generate.
- We can now compare this payment of the associate rejecting the offer to become a partner with the payment he would receive if accepting the offer.

Condition to accept a partnership

- ▶ If joining the partnership they get $\Pi_P - C$
- ▶ Highly skilled associates join the partnership if
$$\Pi_P - C = V_H + NV_L - C \geq \frac{M(N-1)V_L + V_H}{M(N-1)+1}$$
- ▶ This requires $C \leq C^{**} = \frac{M(N-1)V_H + (M(N-1)^2 + 1)V_L}{M(N-1)+1}$
- ▶ If mentoring costs are not too high, accepting a partnership is optimal

Condition to accept a partnership

- We can now determine the payments when entering the partnership and compare this with the payment when refusing the offer.
- ▶ An associate joining the partnership would receive the profits the partnership generates, less the costs of mentoring associates.
- ▶ If the payment received in a partnership is higher than when refusing it, the associate would accept the offer.
- ▶ Solving for the condition that the payments from the partnership are higher than the payments when refusing it, gives the condition in the *formula*.
- ▶ We thus see that provided mentoring costs are not too high, an associate would accept the offer of becoming a partner.
- Thus new partners can be found as long as the mentoring costs are not prohibitively high.

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- Thus far we have assumed that becoming a partner is only offered to highly-skilled associates. We will now investigate under which condition only highly-skilled associates become partners.

Unskilled associate accepting the partnership

- ▶ If an unskilled partner is appointed the investment bank loses reputation and it cannot be sold
- ▶ Unskilled partners will generate surplus V_L and obtain surplus V_L from each associate and they have previously spent P to purchase the partnership, which cannot be recovered
- ▶ If not a partner, the unskilled associate would obtain V_L
- ▶ Accept the partnership if $V_L + NV_L - \rho P \geq V_L$
- ▶ This requires $P \leq P^{**} = \frac{NV_L}{\rho}$

Unskilled associate accepting the partnership

- We will first look at the conditions under which an unskilled associate would accept a partnership, before than subsequently determining why such an offer would not be made.
- ▶
 - We make the strong assumption that appointing an unskilled partner would lead to a loss in reputation for the investment bank.
 - This loss in reputation will make the equity stake worthless to its current owners and the surplus generated will fall to the low surplus, regardless of the ability of partners.
- ▶
 - The unskilled partner will generate a low surplus and as it is known that who the unskilled partner is, will only be able to claim this low surplus.
 - He will also obtain the low surplus from each of its associates. As the associate is unskilled he cannot mentor and hence will not incur mentoring costs.
 - Accepting the offer to become a partner would require the associate to purchase a stake in the investment bank as some price P , on which a return of ρ is required to account for the risks of the investment.
 - As we assumed that the investment bank loses its reputation, this price cannot be recovered in the future and is therefore lost.
- ▶ These payments from the partnership can now be compared to the payments he will receive if rejecting the offer of becoming a partner and accepting a role in an incorporated investment bank paying him his low surplus only.
- ▶ *Formula*
- ▶ The offer of becoming partner is accepted if the price the associate has to pay for his equity stake is sufficiently low.
- Having determined the condition under which an unskilled associate would accept the offer of becoming partner, we can now look at the incentive of existing partners to make such an offer.

Avoiding appointing unskilled partners

- ▶ If no highly skilled associate is available, $M - 1$ partners remain, the total value of the partnership is then $(M - 1) P^*$
- ▶ If an unskilled associate is available, we retain M partners, the total value if the partnership is MP^{**}
- ▶ Unskilled associates are not appointed if $(M - 1) P^* \geq MP^{**}$
- ▶ This requires $w_P \leq w_P^* = V_H + \left(1 - \frac{\rho-1}{\rho} \frac{M}{M-1}\right) NV_L$
- ▶ For $w_P^* \geq 0$, we need $\frac{V_H}{V_L} \geq N \left(\frac{\rho-1}{\rho} \frac{M}{M-1} - 1\right)$
- ▶ The benefits generated by highly-skilled partners have to be sufficiently high

- The aim would be to find conditions under which unskilled associates are not offered to become partners.
- ▶
 - Assume now that no highly skilled associate can be found and the number of partners would be reduced if no unskilled associate is made an offer.
 - The value of the partnership for each partner had been determined above and the total value of the partnership is then this value for each of the remaining partners.
- ▶
 - If an unskilled partner is appointed, the number of partners remains the same.
 - The value of the partnership for each of the partners is then given from above.
- ▶ If partners seek to maximize the value of their partnership overall, they will not appoint unskilled associates if the value in this case exceeds that of appointing an unskilled associate.
- ▶ Inserting for all expressions, we see that this condition requires that the wages paid to partners must be sufficiently small.
- ▶ This condition can only be fulfilled if the maximum wage is positive, which requires the expression in the *formula*.
- ▶ Thus we need that the difference between highly skilled partner and unskilled associates is sufficiently high.
- We have established that provided the difference in skills between the two types of associates is sufficiently high, unskilled partners will not be appointed.

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- The last element to be considered is that of mentoring associates. Thus far we assume that partners will mentor associates and then select the associate that is highly skilled to join as a partner.
- We will now determine the incentives to conduct this mentoring.

Not appointing new partners

- ▶ Partners must have incentives to mentor associates
- ▶ If a partner does not mentor and does not appoint an unskilled associate, there are only $M - 1$ partners left
- ▶ These $M - 1$ partners generate future profits, but this is shared by M partners, the value becomes $\frac{M-1}{M}P^*$
- ▶ If mentoring associates, the value of the partnership is P^* and the partner faces costs C , he receives $P^* - C$

Not appointing new partners

- We will look at the implications if no new partners are appointed.
- ▶ If we assume that mentoring associates is costly to each individual partner, then moral hazard suggests that partners would easily avoid incurring these costs and not mentor associates. We thus need to ensure that the incentives are such that partners are finding it beneficial to mentor, despite the costs of doing so.
- ▶ Let us assume a partner does not mentor associates and also does not appoint an unskilled associate (assuming that much of the skills are developed from mentoring), the number of partners will fall short after an existing partner leaves the investment bank.
- ▶
 - The remaining partner will still generate their profits, but as the partner leaving the investment bank cannot sell its share to a new partner, still benefits from the profits generated. Thus the profits generated by fewer partners are to be shared by all partners.
 - The value of the partnership reduces as less partners generate the profits.
- ▶
 - Let us now assume all partners mentor their associates, then the value of the partnership is retained. We have shown above that only highly-skilled associates are appointed, and that they accept such an offer; we assume here that the requisite conditions for this are fulfilled.
 - However, the partners face mentoring costs, which reduces the value of the partnership to them.
 - The net value of the partnership is then its value less any mentoring costs.
- We can now determine the conditions under which a partner will mentor their associates.

Conditions to mentor associates

- ▶ A partner will mentor if $P^* - C \geq \frac{M-1}{M} P^*$
- ▶ This requires $C \leq C^{***} = \frac{V_H + NV_L - w_P}{M(\rho-1)}$
- ▶ If we set $w_P = 0$ this is least restrictive
- ▶ If mentoring costs are sufficiently low, partners are mentoring associates

Conditions to mentor associates

- We can now establish whether partners engage in mentoring their associates.
- ▶ If the value of the partnership with mentoring is higher than without mentoring, we will observe mentoring.
- ▶ We can insert for all variables in this condition and obtain that mentoring will occur if mentoring costs are not too high.
- ▶ The constraint on mentoring costs is least restrictive if partners do not draw a wage but their remuneration is solely based on the profits of the partnership.
- ▶ With most partnership paying their partners mainly out of the profits that are generated assuming the absence of a fixed wage is a reasonable assumption.
- We have thus established the condition under which mentoring will occur.

Conditions for partnerships to exist

$$\blacktriangleright C \leq C^* = V_H - V_L (1 + (\rho - 1) N)$$

$$C \leq C^{**} = \frac{M(N-1)V_H + (M(N-1)^2 + 1)V_L}{M(N-1) + 1}$$

$$C \leq C^{***} = \frac{V_H + NV_L}{M(\rho - 1)}$$

$$\frac{V_H}{V_L} \geq 1 + (\rho - 1) N$$

$$\frac{V_H}{V_L} \geq N \left(\frac{\rho - 1}{\rho} \frac{M}{M - 1} - 1 \right)$$

- ▶ Mentoring costs must be sufficiently low
- ▶ Surplus of highly-skilled partners must be sufficiently high

Conditions for partnerships to exist

- We can now collect all the conditions that are required for partnership to exist and be sustainable
- ▶ This is the condition to ensure associates join the partnership.
- ▶ This is the condition to ensure associates accept the offer of becoming a partner.
- ▶ This is the condition to ensure partners mentor their associates.
- ▶ This is the condition to ensure associates join the partnership.
- ▶ This is the condition to ensure no unskilled associates are offered to become partner.
- ▶ We see that partnerships are viable if the mentoring costs are not too high
- ▶ and the difference in the surplus between highly-skilled and unskilled associates is sufficiently large.
-

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Remuneration differentials with partnerships

- ▶ Partnerships are viable if the cost of mentoring associates is not too high and the differential between high-skilled and low-skilled associates is sufficiently high
- ▶ Associates accept low wages as the prospect of future income as a partner compensates them
- ▶ This leads to large income discrepancies within partnerships

Remuneration differentials with partnerships

- We can now look at the implications of our model for the difference in remuneration between partners and associates.
 - ▶
 - We have seen that partnerships are viable if mentoring costs are low
 - and there are large differences in the skill levels between associates.
 - ▶ Associates will accept a low wage in the early stages of their career in the hop of joining the partnership and obtaining larger payments in the future.
 - ▶ Such an approach will lead to a larger difference in remuneration between partners and associates than it would other be between highly-skilled employees and unskilled employees.
- Partners are often substantially better paid than associates and this difference is more pronounced than in incorporated investment banks, where differences between senior managers (equivalent to partners) and junior employees (equivalent to associates) are usually smaller.

Demise of partnerships

- ▶ The demands on partners have increased over time, more involvement in client work left less time for mentoring
- ▶ The size of partnerships had to increase as business expanded, making identifying suitable associates more difficult
- ▶ The costs of mentoring in terms of lost opportunities for business became too high and partnerships became unviable
- ▶ Low pay as associate makes joining partnerships less attractive as other investment banks offer higher salaries to attract highly-skilled associates

Demise of partnerships

- We have seen a significant reduction in the number of partnerships in investment banks; the model here might provide some insights into the reasons for this observation.
- ▶
 - Over time we have observed that the demands on partners has increased as clients become ever larger and each generating more revenue to an investment bank.
 - This requires a deeper involvement of partners in client work that would otherwise be left to associates. The reason is that investment banks want to give important clients the impression that their interests are considered at the highest level, such that even partners are getting involved in the advice they receive.
 - ▶
 - Additionally, the increased size of clients and the demands for an international presence in more and more countries required the size of partnerships to increase such that the increasingly difficult work can be conducted.
 - Requiring more partners also requires that more highly-skilled associates are identified. As identification of such skills is not easy and also not perfect, this has added to the problem of retaining only highly-skilled partners. Appointing less and less skilled partners to fill positions in order to expand business might have led to lower differences between partners and the unskilled associates, violating the conditions for a viable partnership.
 - ▶
 - Given the involvement in client work, partners will have less time to mentor associates. The costs of mentoring will include the opportunity costs of not advising clients, but also of associates not being available for client work while improving their skills.
 - One of the conditions for partnerships to be viable, was that mentoring costs will have to be low; these developments may well have increase mentoring costs for many former partnerships to a level that they have become unfeasible.
 - ▶ The low pay that associates are obtaining make partnership less attractive than incorporated investment banks that are paying high salaries from the start and they might lure highly skilled associates who might underestimate their skill level and thus their chances of becoming partners. This would again reduce the skill difference within investment banking partnerships and may have made some partnerships unviable.
- We thus see that the changing environment in the last decades has made it more and more difficult to sustain investment banking partnership.



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