

Chapter 18.1

The impact of the organisational structure

Outline

- Problem and model assumptions
- Possible organisational forms
- Optimal organisational form
- Summary

■ Problem and model assumptions

■ Possible organisational forms

■ Optimal organisational form

■ Summary

Flat organisation

Flat organisation

- ▶ Investment banks typically have a **flat** organisational structure

Flat organisation

- ▶ Investment banks typically have a flat organisational structure
- ▶ Oversight by senior managers on advice given to clients is **minimal**

Flat organisation

- ▶ Investment banks typically have a flat organisational structure
- ▶ Oversight by senior managers on advice given to clients is minimal
- ▶ Senior managers might lack the **specialist knowledge**

Flat organisation

- ▶ Investment banks typically have a flat organisational structure
- ▶ Oversight by senior managers on advice given to clients is minimal
- ▶ Senior managers might lack the specialist knowledge, but have **experience**

Flat organisation

- ▶ Investment banks typically have a flat organisational structure
- ▶ Oversight by senior managers on advice given to clients is minimal
- ▶ Senior managers might lack the specialist knowledge, but have experience

Priority of ideas

Priority of ideas

- ▶ Managers provide ideas for advice that are **accepted** by clients with probability π_M and generate surplus V_M

Priority of ideas

- ▶ Managers provide ideas for advice that are accepted by clients with probability π_M and generate surplus V_M
- ▶ Specialists provide ideas for advice that are **accepted** by clients with probability π_S and generate surplus V_S

Priority of ideas

- ▶ Managers provide ideas for advice that are accepted by clients with probability π_M and generate surplus V_M
- ▶ Specialists provide ideas for advice that are accepted by clients with probability π_S and generate surplus V_S
- ▶ The ideas of higher ranked staff have **priority** in being put forward

Priority of ideas

- ▶ Managers provide ideas for advice that are accepted by clients with probability π_M and generate surplus V_M
- ▶ Specialists provide ideas for advice that are accepted by clients with probability π_S and generate surplus V_S
- ▶ The ideas of higher ranked staff have priority in being put forward

■ Problem and model assumptions

■ Possible organisational forms

■ Optimal organisational form

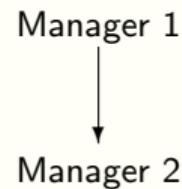
■ Summary

Hierarchical structure

Hierarchical structure

Manager 1

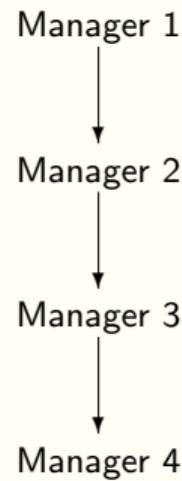
Hierarchical structure



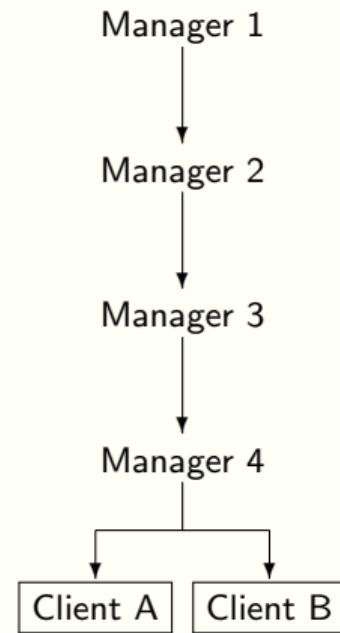
Hierarchical structure



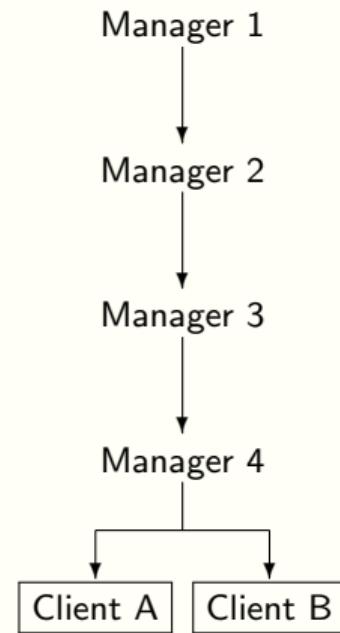
Hierarchical structure



Hierarchical structure



Hierarchical structure



Investment bank profits in hierarchical structures

Investment bank profits in hierarchical structures

- ▶ **None** of the four managers have an idea that is accepted
- ▶ $\Pi_H = (1 - \pi_M)^4$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by **one** of the **clients**
- ▶ $\Pi_H = 1 - (1 - \pi_M)^4$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by **both** clients
- ▶ $\Pi_H = \left(1 - (1 - \pi_M)^4\right)^2$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by both clients and generates the **surplus** from **both**
- ▶ $\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by both clients and generates the surplus from both
- ▶ or it has an idea for **one client**, but
- ▶
$$\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M + \left(1 - (1 - \pi_M)^4\right)$$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by both clients and generates the surplus from both
- ▶ or it has an idea for one client, but **not the other**
- ▶
$$\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^4\right) (1 - \pi_M)^4$$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by both clients and generates the surplus from both
- ▶ or it has an idea for one client, but not the other, generating surplus from **one client**
- ▶ $\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^4\right) (1 - \pi_M)^4 V_M$

Investment bank profits in hierarchical structures

- ▶ Managers have an idea that is accepted by both clients and generates the surplus from both
- ▶ or it has an idea for one client, but not the other, generating surplus from one client
- ▶ $\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^4\right) (1 - \pi_M)^4 V_M$
- ▶ If no manager has an acceptable idea, **no surplus** is generated

Investment bank profits in hierarchical structures

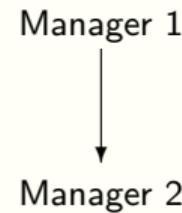
- ▶ Managers have an idea that is accepted by both clients and generates the surplus from both
- ▶ or it has an idea for one client, but not the other, generating surplus from one client
- ▶ $\Pi_H = 2 \left(1 - (1 - \pi_M)^4\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^4\right) (1 - \pi_M)^4 V_M$
- ▶ If no manager has an acceptable idea, no surplus is generated

Flat structure

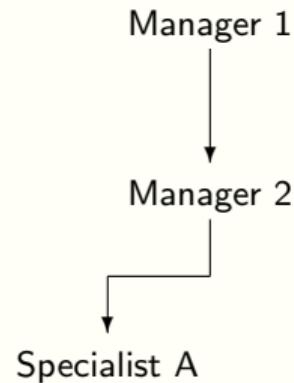
Flat structure

Manager 1

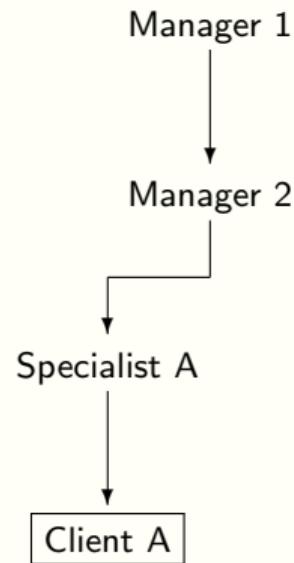
Flat structure



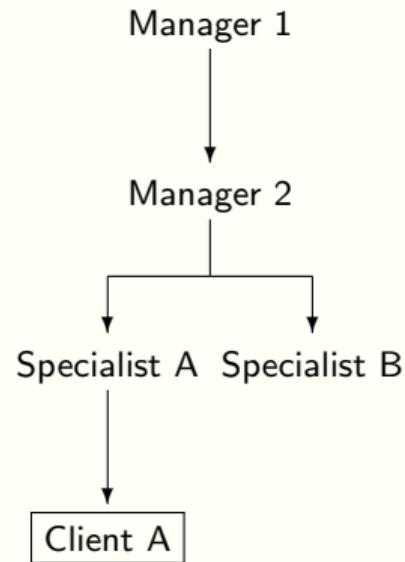
Flat structure



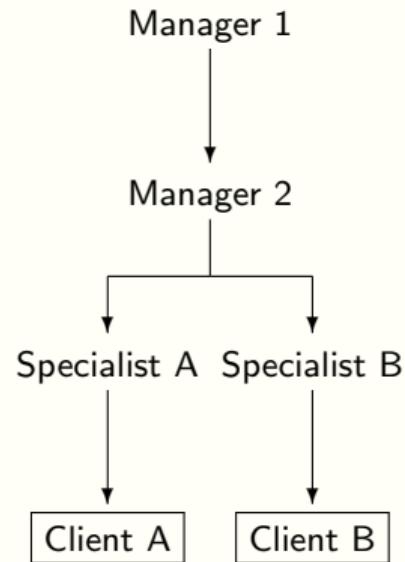
Flat structure



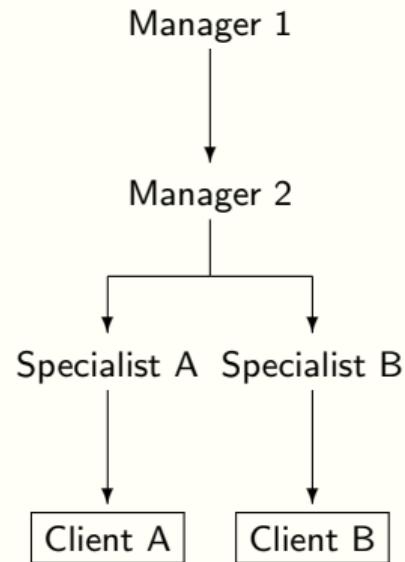
Flat structure



Flat structure



Flat structure



Investment bank profits in flat structures

Investment bank profits in flat structures

- ▶ The managers **have an idea that is accepted**

- ▶ $\Pi_F = 1 - (1 - \pi_M)^2$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients

$$\Pi_F = \left(1 - (1 - \pi_M)^2\right)^2$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the **surplus**
- ▶ $\Pi_F = 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by **one client**
-
- $$\begin{aligned} \text{▶ } \Pi_F = & 2 \left(1 - (1 - \pi_M)^2 \right)^2 V_M \\ & + \left(1 - (1 - \pi_M)^2 \right) \end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by one client, but **not the other**
-
- $$\begin{aligned} \text{▶ } \Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 \end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by one client, but not the other, generating **surplus**
-
- $$\begin{aligned} \Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 V_M \end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the **specialist** might have an idea
-
- $$\begin{aligned} \Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) \end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
- ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate **surplus**
- ▶
$$\Pi_F = 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S)$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate surplus
 - ▶ or **no managers** have ideas that are accepted
-
- $$\begin{aligned}\Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) \\ & + (1 - \pi_M)^4\end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
 - ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate surplus
 - ▶ or no managers have ideas that are accepted, but the **specialists** might have
-
- $$\begin{aligned} \Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) \\ & + (1 - \pi_M)^4 \pi_S \end{aligned}$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
- ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate surplus
- ▶ or no managers have ideas that are accepted, but the specialists might have and generate surplus
- ▶
$$\Pi_F = 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) + 2(1 - \pi_M)^4 \pi_S V_S$$

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
- ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate surplus
- ▶ or no managers have ideas that are accepted, but the specialists might have and generate surplus
- ▶
$$\begin{aligned}\Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) \\ & + 2(1 - \pi_M)^4 \pi_S V_S\end{aligned}$$
- ▶ If neither managers nor specialists have ideas accepted, **no surplus** is generated

Investment bank profits in flat structures

- ▶ The managers have an idea that is accepted by both clients, and generate the surplus
- ▶ or the managers have an idea that is accepted by one client, but not the other, generating surplus, for this remaining client the specialist might have an idea and generate surplus
- ▶ or no managers have ideas that are accepted, but the specialists might have and generate surplus
- ▶
$$\begin{aligned}\Pi_F = & 2 \left(1 - (1 - \pi_M)^2\right)^2 V_M \\ & + 2 \left(1 - (1 - \pi_M)^2\right) (1 - \pi_M)^2 (V_M + \pi_S V_S) \\ & + 2(1 - \pi_M)^4 \pi_S V_S\end{aligned}$$
- ▶ If neither managers nor specialists have ideas accepted, no surplus is generated

Independent units

Independent units

Specialist A1

Independent units



Independent units



Independent units

Specialist A1 Specialist B1

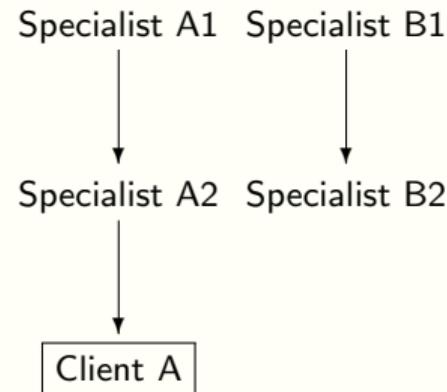


Specialist A2

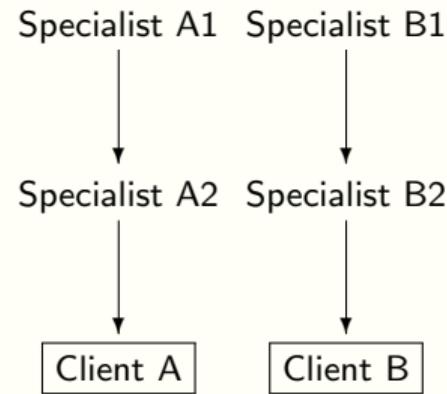


Client A

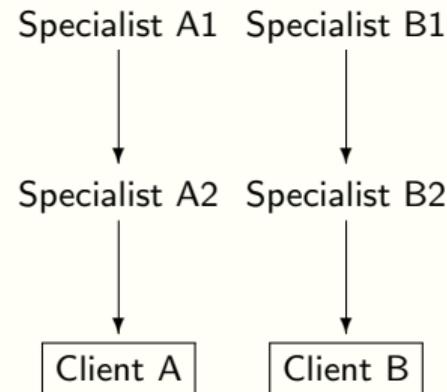
Independent units



Independent units



Independent units



Investment bank profits with independent units

Investment bank profits with independent units

- ▶ Specialists might have ideas accepted
- ▶ $\Pi_I = \left(1 - (1 - \pi_S)^2\right)$

Investment bank profits with independent units

- ▶ Specialists might have ideas accepted and generate **surplus**
- ▶ $\Pi_I = \left(1 - (1 - \pi_S)^2\right) V_S$

Investment bank profits with independent units

- ▶ Specialists might have ideas accepted and generate surplus for each of the clients
- ▶ $\Pi_I = 2 \left(1 - (1 - \pi_S)^2\right) V_S$

Investment bank profits with independent units

- ▶ Specialists might have ideas accepted and generate surplus for each of the clients
- ▶ $\Pi_I = 2 \left(1 - (1 - \pi_S)^2\right) V_S$
- ▶ If neither of the two specialists for each client have an idea accepted, **no surplus** is generated

Investment bank profits with independent units

- ▶ Specialists might have ideas accepted and generate surplus for each of the clients
- ▶ $\Pi_I = 2 \left(1 - (1 - \pi_S)^2\right) V_S$
- ▶ If neither of the two specialists for each client have an idea accepted, no surplus is generated

■ Problem and model assumptions

■ Possible organisational forms

■ Optimal organisational form

■ Summary

Comparison of profits to investment banks

Comparison of profits to investment banks

- ▶ Comparing investment bank profits, we obtain that

Comparison of profits to investment banks

- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$

Comparison of profits to investment banks

- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$
- ▶ $\Pi_H > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-(1-\pi_S)^2}{1-(1-\pi_M)^4}$

Comparison of profits to investment banks

- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$
- ▶ $\Pi_H > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-(1-\pi_S)^2}{1-(1-\pi_M)^4}$
- ▶ $\Pi_F > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-\pi_S(1-\pi_M)^2-(1-\pi_S)^2}{1-(1-\pi_M)^2}$

Comparison of profits to investment banks

- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$
- ▶ $\Pi_H > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-(1-\pi_S)^2}{1-(1-\pi_M)^4}$
- ▶ $\Pi_F > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-\pi_S(1-\pi_M)^2-(1-\pi_S)^2}{1-(1-\pi_M)^2}$
- ▶ If $\frac{V_M}{V_S} < 1$, then $\Pi_F < \Pi_I$

Comparison of profits to investment banks

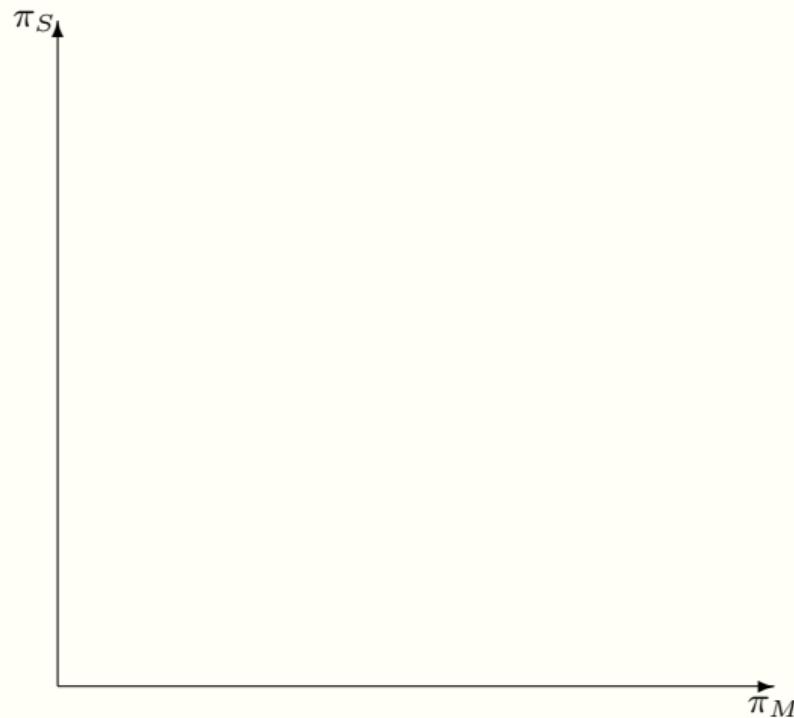
- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$
- ▶ $\Pi_H > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-(1-\pi_S)^2}{1-(1-\pi_M)^4}$
- ▶ $\Pi_F > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-\pi_S(1-\pi_M)^2-(1-\pi_S)^2}{1-(1-\pi_M)^2}$
- ▶ If $\frac{V_M}{V_S} < 1$, then $\Pi_F < \Pi_I$ and the flat structure is **never** optimal

Comparison of profits to investment banks

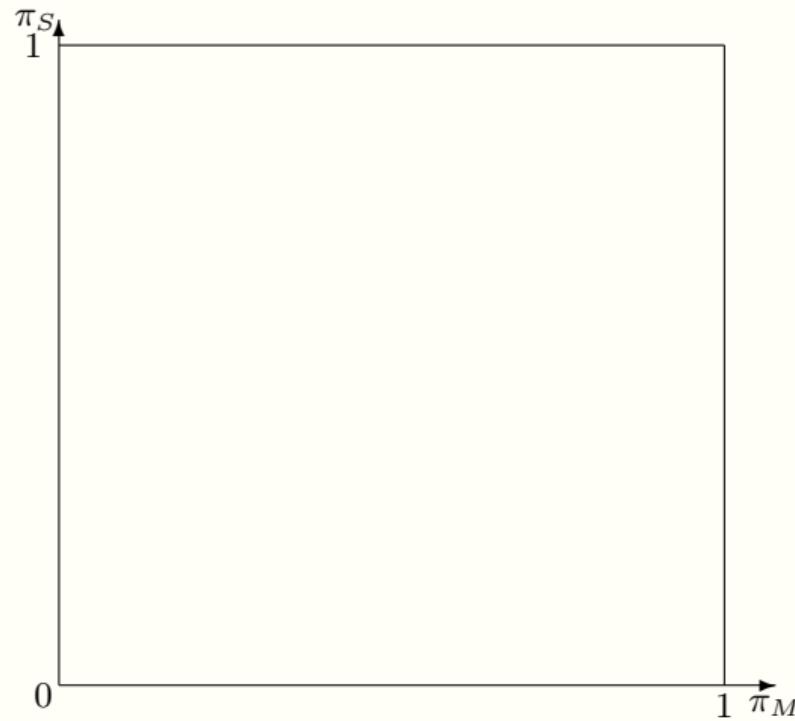
- ▶ Comparing investment bank profits, we obtain that
- ▶ $\Pi_H > \Pi_F$ if $\frac{V_M}{V_S} > \frac{\pi_S}{1-(1-\pi_M)^2}$
- ▶ $\Pi_H > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-(1-\pi_S)^2}{1-(1-\pi_M)^4}$
- ▶ $\Pi_F > \Pi_I$ if $\frac{V_M}{V_S} > \frac{1-\pi_S(1-\pi_M)^2-(1-\pi_S)^2}{1-(1-\pi_M)^2}$
- ▶ If $\frac{V_M}{V_S} < 1$, then $\Pi_F < \Pi_I$ and the flat structure is never optimal

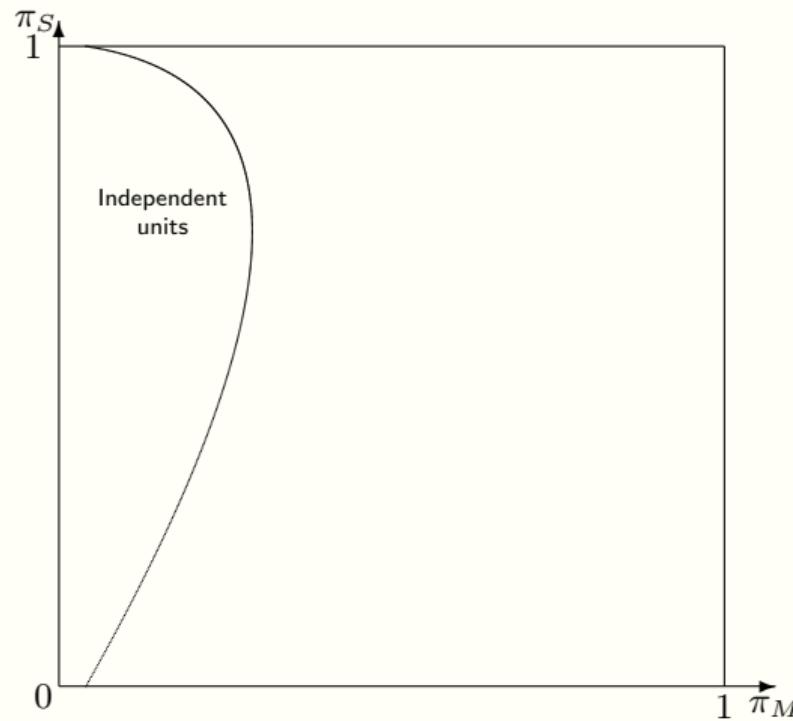
Managers providing higher surplus than specialists ($V_M > V_S$)

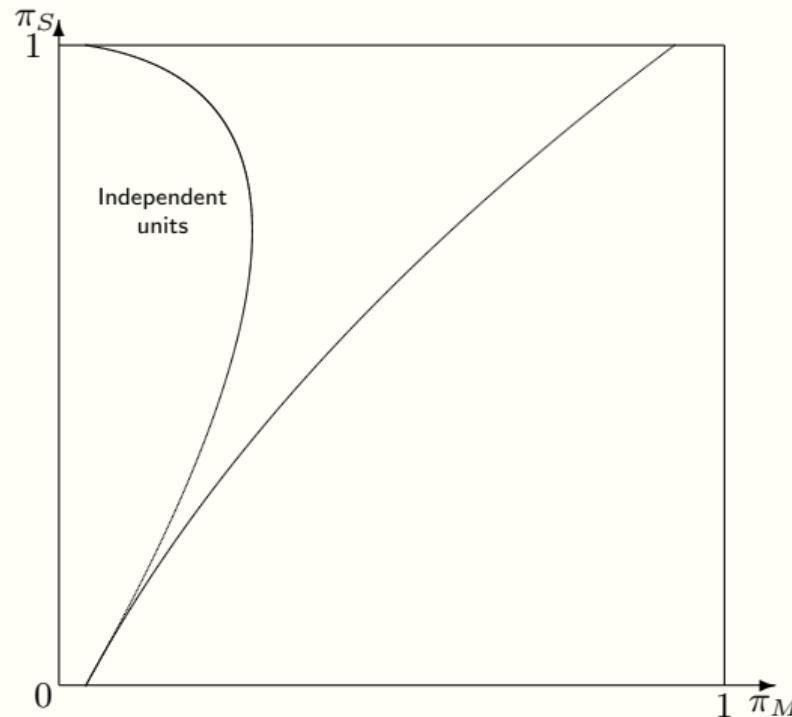
Managers providing higher surplus than specialists ($V_M > V_S$)

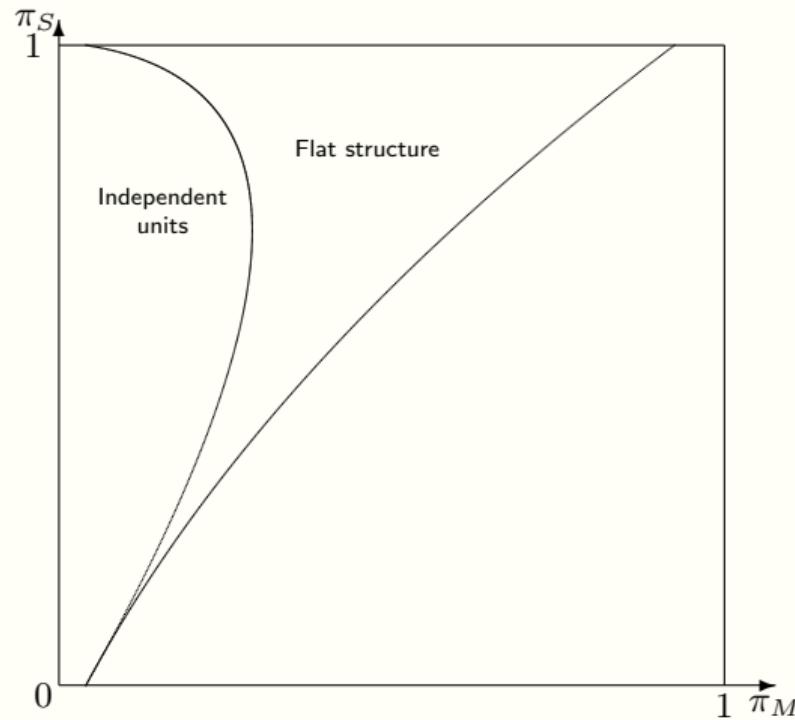


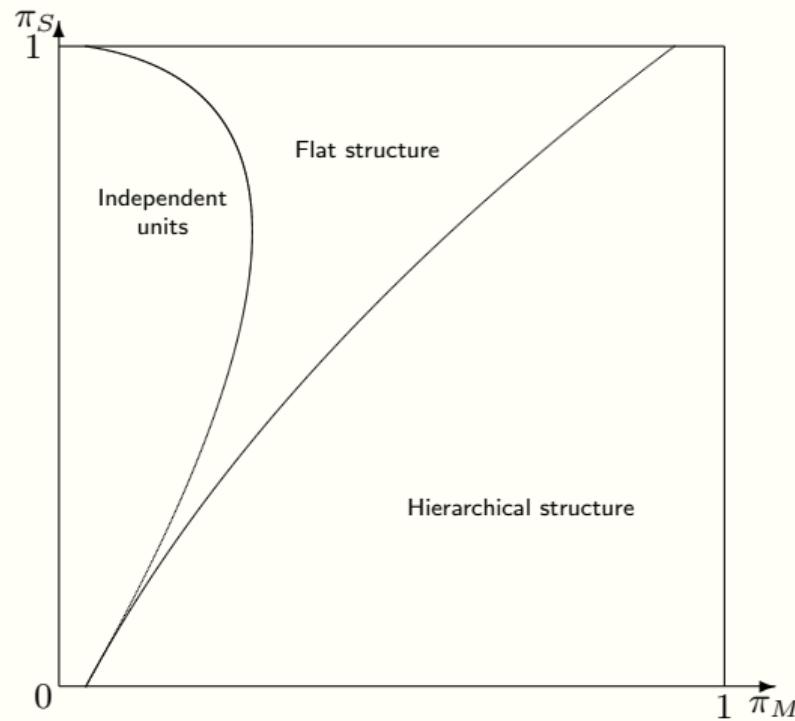
Managers providing higher surplus than specialists ($V_M > V_S$)

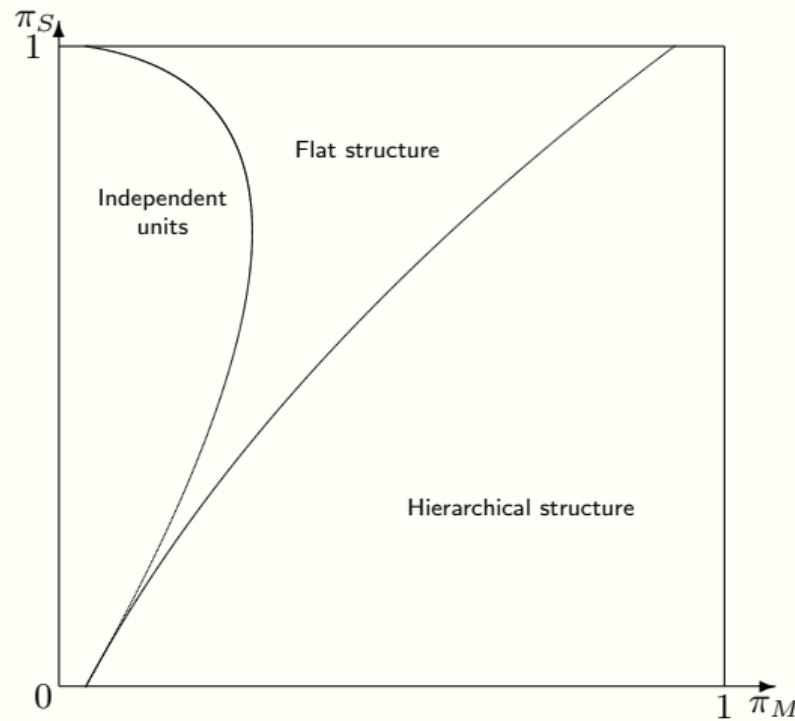


Managers providing higher surplus than specialists ($V_M > V_S$)

Managers providing higher surplus than specialists ($V_M > V_S$)

Managers providing higher surplus than specialists ($V_M > V_S$)

Managers providing higher surplus than specialists ($V_M > V_S$)

Managers providing higher surplus than specialists ($V_M > V_S$)

Trade-off between many ideas and good ideas

Trade-off between many ideas and good ideas

- ▶ Investment banks face a **trade-off** between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures

Trade-off between many ideas and good ideas

- ▶ Investment banks face a trade-off between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures
- ▶ A higher acceptance of ideas from specialists favours a **flatter structure**

Trade-off between many ideas and good ideas

- ▶ Investment banks face a trade-off between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures
- ▶ A higher acceptance of ideas from specialists favours a flatter structure
- ▶ If the acceptance rate are very high, the added layer of management can **improve** the overall revenue at low cost

Trade-off between many ideas and good ideas

- ▶ Investment banks face a trade-off between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures
- ▶ A higher acceptance of ideas from specialists favours a flatter structure
- ▶ If the acceptance rate are very high, the added layer of management can improve the overall revenue at low cost if managers' ideas are **unlikely** to be accepted

Trade-off between many ideas and good ideas

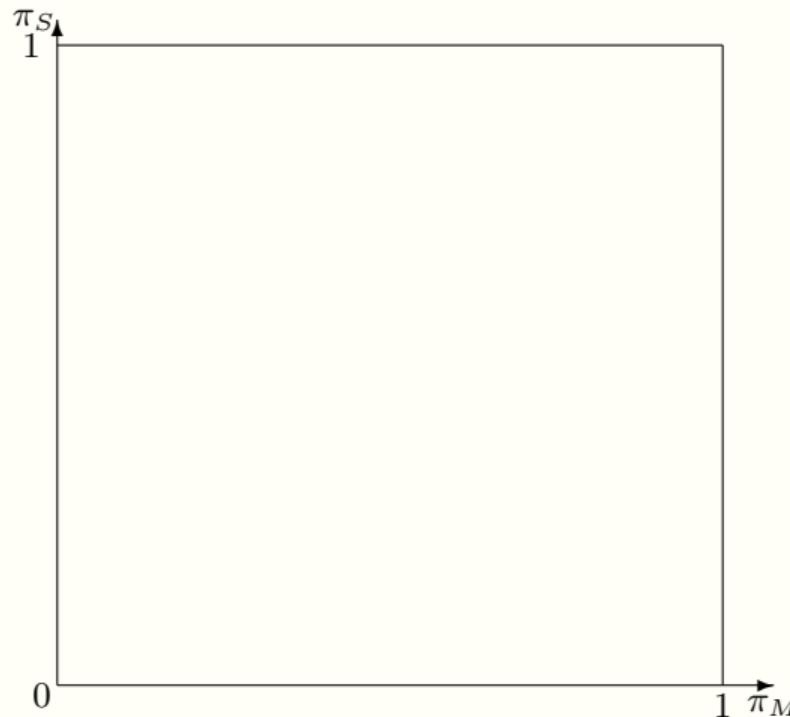
- ▶ Investment banks face a trade-off between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures
- ▶ A higher acceptance of ideas from specialists favours a flatter structure
- ▶ If the acceptance rate are very high, the added layer of management can improve the overall revenue at low cost if managers' ideas are unlikely to be accepted
- ▶ A **flatter structure** is preferred if specialists are producing advice that is more likely to be accepted by clients

Trade-off between many ideas and good ideas

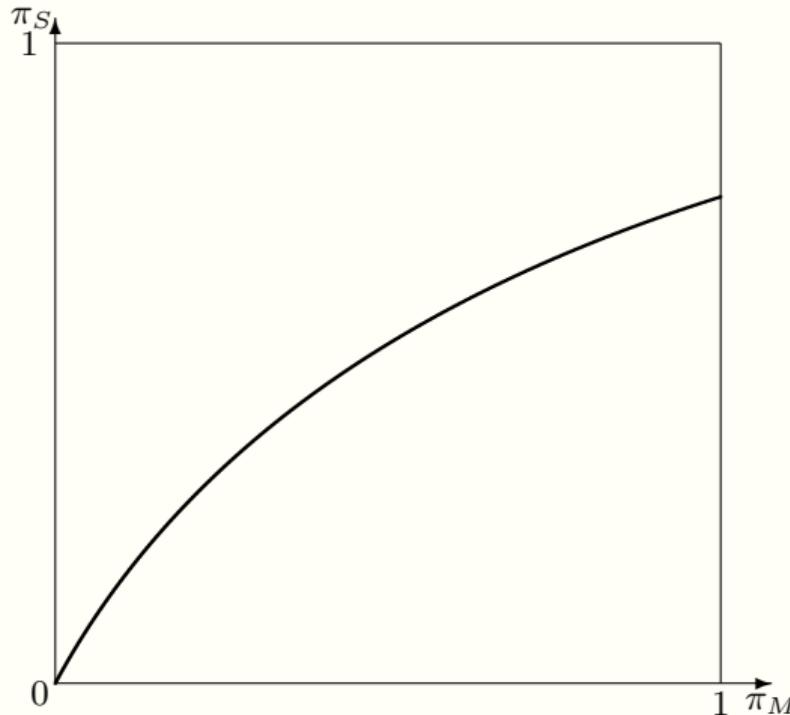
- ▶ Investment banks face a trade-off between more ideas by managers in a hierarchical structure and fewer but better ideas in flatter structures
- ▶ A higher acceptance of ideas from specialists favours a flatter structure
- ▶ If the acceptance rate are very high, the added layer of management can improve the overall revenue at low cost if managers' ideas are unlikely to be accepted
- ▶ A flatter structure is preferred if specialists are producing advice that is more likely to be accepted by clients

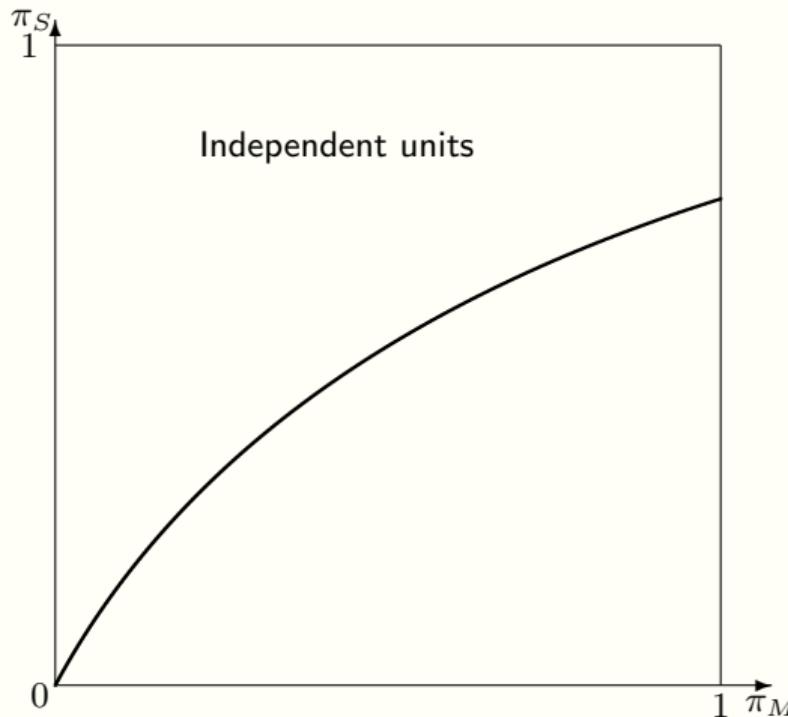
Managers providing lower surplus than specialists ($V_M < V_S$)

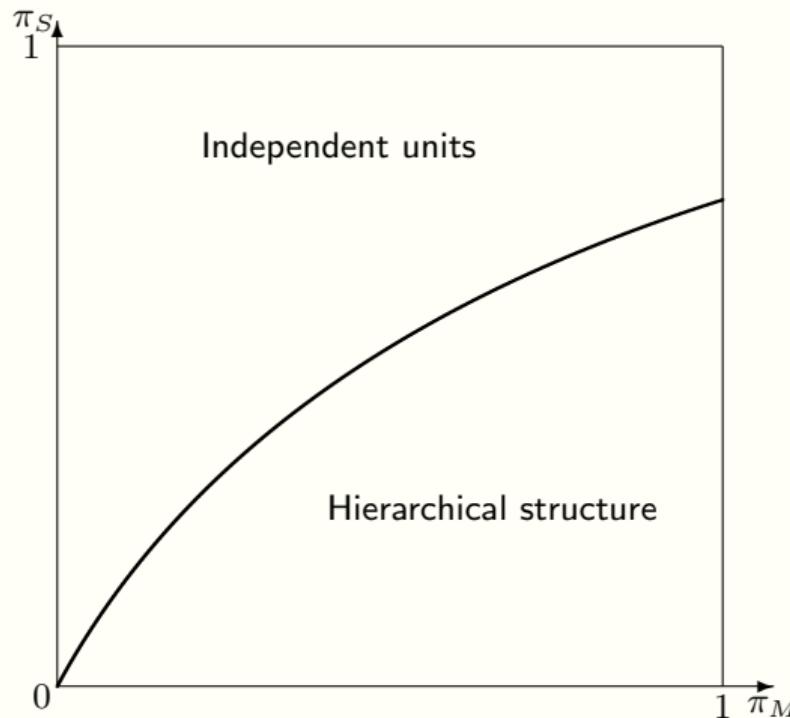
Managers providing lower surplus than specialists ($V_M < V_S$)

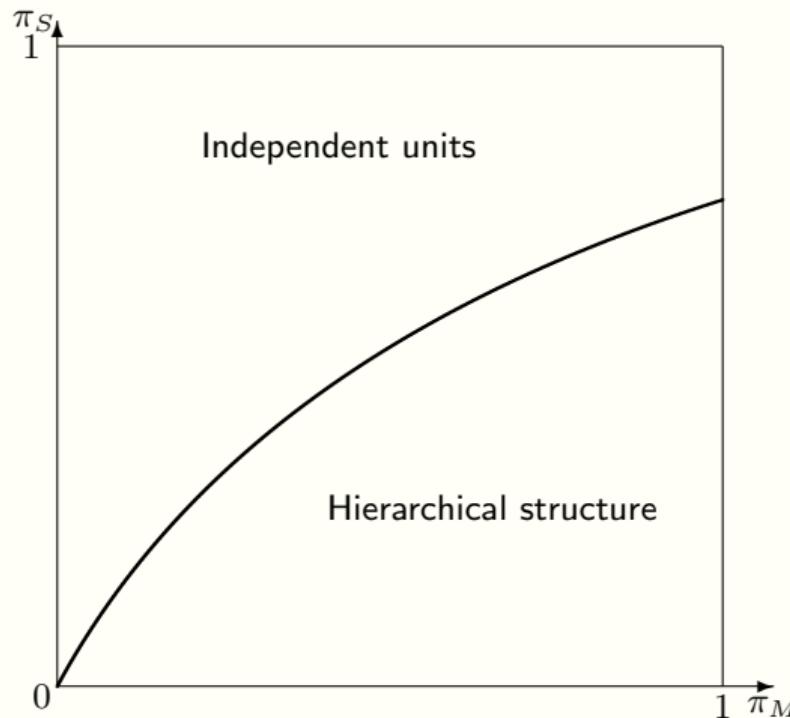


Managers providing lower surplus than specialists ($V_M < V_S$)



Managers providing lower surplus than specialists ($V_M < V_S$)

Managers providing lower surplus than specialists ($V_M < V_S$)

Managers providing lower surplus than specialists ($V_M < V_S$)

Specialist involvement is preferred

Specialist involvement is preferred

- ▶ If managers generate less surplus than specialists, **flatter structures** are favoured even more

Specialist involvement is preferred

- ▶ If managers generate less surplus than specialists, flatter structures are favoured even more
- ▶ A flat structure is **not** optimal

Specialist involvement is preferred

- ▶ If managers generate less surplus than specialists, flatter structures are favoured even more
- ▶ A flat structure is not optimal as the management involvement is **not** generating enough surplus

Specialist involvement is preferred

- ▶ If managers generate less surplus than specialists, flatter structures are favoured even more
- ▶ A flat structure is not optimal as the management involvement is not generating enough surplus
- ▶ Structures are either hierarchical **or** independent

Specialist involvement is preferred

- ▶ If managers generate less surplus than specialists, flatter structures are favoured even more
- ▶ A flat structure is not optimal as the management involvement is not generating enough surplus
- ▶ Structures are either hierarchical or independent

■ Problem and model assumptions

■ Possible organisational forms

■ Optimal organisational form

■ Summary

Benefits of flatter structures

Benefits of flatter structures

- ▶ Hierarchical structures benefits from the input of **many layers** of management

Benefits of flatter structures

- ▶ Hierarchical structures benefits from the input of many layers of management
- ▶ This ability to generate many ideas needs to be weighed against the potentially **lower surplus** these ideas generate

Benefits of flatter structures

- ▶ Hierarchical structures benefits from the input of many layers of management
- ▶ This ability to generate many ideas needs to be weighed against the potentially lower surplus these ideas generate
- ▶ If specialists generate more surplus, **flatter structures** are preferred

Benefits of flatter structures

- ▶ Hierarchical structures benefit from the input of many layers of management
- ▶ This ability to generate many ideas needs to be weighed against the potentially lower surplus these ideas generate
- ▶ If specialists generate more surplus, flatter structures are preferred as then the ideas of **specialists** prevail

Benefits of flatter structures

- ▶ Hierarchical structures benefit from the input of many layers of management
- ▶ This ability to generate many ideas needs to be weighed against the potentially lower surplus these ideas generate
- ▶ If specialists generate more surplus, flatter structures are preferred as then the ideas of specialists prevail

Different knowledge bases

Different knowledge bases

- ▶ Staff in investment bank have **high levels of knowledge**

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more **general knowledge**

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more general knowledge
- ▶ Specialists might be offering advice that is **easier accepted** by clients

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more general knowledge
- ▶ Specialists might be offering advice that is easier accepted by clients, but managers have more knowledge how to **extract surplus** for the investment bank

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more general knowledge
- ▶ Specialists might be offering advice that is easier accepted by clients, but managers have more knowledge how to extract surplus for the investment bank
- ▶ The requirement to have advice accepted, favours **flatter structures**

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more general knowledge
- ▶ Specialists might be offering advice that is easier accepted by clients, but managers have more knowledge how to extract surplus for the investment bank
- ▶ The requirement to have advice accepted, favours flatter structures, as found in **most** investment banks

Different knowledge bases

- ▶ Staff in investment bank have high levels of knowledge, managers might have more general knowledge
- ▶ Specialists might be offering advice that is easier accepted by clients, but managers have more knowledge how to extract surplus for the investment bank
- ▶ The requirement to have advice accepted, favours flatter structures, as found in most investment banks



This presentation is based on
Andreas Krause: Theoretical Foundations of Investment Banking, Springer Verlag 2024
Copyright © 2024 by Andreas Krause

Picture credits:

Cover: The wub, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0/>, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Canary_Wharf_from_Greenwich_riverside.2022-03-18.jpg
Back: Seb Tyler, CC BY 3.0 <https://creativecommons.org/licenses/by/3.0/>, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Canary_Wharf_Panorama_Night.jpg

Andreas Krause
Department of Economics
University of Bath
Claverton Down
Bath BA2 7AY
United Kingdom

E-mail: mnsak@bath.ac.uk