Andreas Krause



Chapter 16.2 Promotion practices

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000

Outline

- Problem and model assumptions
- Task allocation after failure
- Task allocation after success
- Initial allocation of a low-risk task
- Initial allocation of a high-risk task

Summary

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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Investment banks give high responsibilities to employees in early career stages

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Investment banks give high responsibilities to employees in early career stages
- Not performing well in the early srage of a career is easily a bar to promotion

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Investment banks give high responsibilities to employees in early career stages
- ▶ Not performing well in the early srage of a career is easily a bar to promotion
- Successful employees are promoted quickly

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Successful employees are promoted quickly

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000

Task types

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000
Task types					

Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000
Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making or brokerage

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000
Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making or brokerage
- Failing high-risk tasks are causes the investment bank a loss

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making or brokerage
- ▶ Failing high-risk tasks are causes the investment bank a loss
- This will include corporate finance and proprietary trading

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making or brokerage
- ▶ Failing high-risk tasks are causes the investment bank a loss
- This will include corporate finance and proprietary trading, but also middle office roles such as risk management

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task types					

- Investment banks have two types of tasks, low-risk tasks do not cause any losses if they are failing
- Such tasks might be located in the back office, involve market making or brokerage
- ► Failing high-risk tasks are causes the investment bank a loss
- This will include corporate finance and proprietary trading, but also middle office roles such as risk management

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000
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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Benefits of tasks					

 \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Benefits of tasks					

- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000

- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L
- Employees exert effort to increase the probability of success

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0000

- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L
- Employees exert effort to increase the probability of success, at some costs C

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L
- \blacktriangleright Employees exert effort to increase the probability of success, at some costs C
- Employees can be freely moved between tasks

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L
- \blacktriangleright Employees exert effort to increase the probability of success, at some costs C
- Employees can be freely moved between tasks and we consider 2 time periods

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- \blacktriangleright If the high-risk task is successful the investment bank obtains benefits V_H
- \blacktriangleright If the low-risk task is successful the investment bank obtains benefits V_L
- \blacktriangleright Employees exert effort to increase the probability of success, at some costs C
- Employees can be freely moved between tasks and we consider 2 time periods

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Wages are paid at the end of the second time period

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Wages are paid at the end of the second time period
- They will depend on the success in both time periods

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Wages are paid at the end of the second time period
- They will depend on the success in both time periods
- ► This might be due to claw-back clauses on boni

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Wages are paid at the end of the second time period
- They will depend on the success in both time periods
- > This might be due to claw-back clauses on boni or boni that are paid with delay

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Wages are paid at the end of the second time period
- They will depend on the success in both time periods
- > This might be due to claw-back clauses on boni or boni that are paid with delay
- Wages do not depend on which task has been completed

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Wages are paid at the end of the second time period
- They will depend on the success in both time periods
- > This might be due to claw-back clauses on boni or boni that are paid with delay
- Wages do not depend on which task has been completed

Problem and assumptions After failure After success Low risk High risk 00000 000 000 0000	Summary 0000
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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

Problem and assumptions	After failure 0●00	After success	Low risk 000	High risk 00000	Summary 0000

Optimal effort

Problem and assumptions	After failure 0●00	After success	Low risk 000	High risk 00000	Summary 0000
Optimal effort					

▶ We consider the second time period initially

Problem and assumptions After fai	Low risk 000	High risk 00000	Summary 0000
Optimal effort			

We consider the second time period initially, assuming that the employee has failed its task in time period 1

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

We consider the second time period initially, assuming that the employee has failed its task in time period 1

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• His wages are w_{FS}

• Expected salary: $\Pi_M^2 = w_{FS}$

Problem and assumptions	After failure 0●00	After success	Low risk 000	High risk 00000	Summary 0000
Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- His wages are w_{FS} if he is successful,

• Expected salary: $\Pi_M^2 = \pi_2 w_{FS}$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- ▶ His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF}$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- ▶ His wages are w_{FS} if he is successful, if he fails again he gets w_{FF} , and he faces costs of effort
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$

Problem and assumptions	After failure ○●○○	After success	Low risk 000	High risk 00000	Summary 0000
Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$
- Employees are choosing the optimal success probability

Problem and assumptions	After failure ○●○○	After success	Low risk 000	High risk 00000	Summary 0000
Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$
- Employees are choosing the optimal success probability by solving $\frac{\partial \Pi_M^2}{\partial \pi_2} = 0$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$

Employees are choosing the optimal success probability by solving ∂Π²_M/∂π₂ = 0
 ∂C₂/∂π₂ = w_{FS} - w_{FF}

Problem and assumptions	After failure 0●00	After success	Low risk 000	High risk 00000	Summary 0000
Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$

▶ Employees are choosing the optimal success probability by solving ∂Π²_M/∂π₂ = 0
 ▶ ∂C₂/∂π₂ = w_{FS} - w_{FF}

• Highest effort if $w_{FS} - w_{FF}$ is maximized as $\frac{\partial^2 C_2}{\partial \pi_2^2} > 0$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$
- Employees are choosing the optimal success probability by solving ∂Π²_M/∂π₂ = 0
 ∂C₂/∂π₂ = w_{FS} w_{FF}
- Highest effort if $w_{FS} w_{FF}$ is maximized as $\frac{\partial^2 C_2}{\partial \pi_0^2} > 0$
- lnvestment bank will set $w_{FF} = 0$ as this maximizes their profits

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- We consider the second time period initially, assuming that the employee has failed its task in time period 1
- \blacktriangleright His wages are w_{FS} if he is successful, if he fails again he gets w_{FF}
- Expected salary: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2$
- Employees are choosing the optimal success probability by solving ∂Π²_M/∂π₂ = 0
 ∂C₂/∂π₂ = w_{FS} w_{FF}
- Highest effort if $w_{FS} w_{FF}$ is maximized as $\frac{\partial^2 C_2}{\partial \pi_2^2} > 0$
- lnvestment bank will set $w_{FF} = 0$ as this maximizes their profits

er failure After success	Low risk	High risk	Summary
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Problem and assumptions	After failure 00●0	After success	Low risk 000	High risk 00000	Summary 0000

linvestment bank obtain the benefits V_i if successful

Problem and assumptions	After failure 00●0	After success	Low risk 000	High risk 00000	Summary 0000

 \blacktriangleright Investment bank obtain the benefits V_i if successful, pays the wages

• Low risk task: $\Pi_B^{2L} = \pi_2 V_L - (\pi_2 w_{FS} + (1 - \pi_2) w_{FF})$ • High risk task: $\Pi_B^{2H} = \pi_2 V_H - (\pi_2 w_{FS} + (1 - \pi_2) w_{FF})$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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- Investment bank obtain the benefits V_i if successful, pays the wages, and for the high-risk task loses equity if not successful
- Low risk task: $\Pi_B^{2L} = \pi_2 V_L (\pi_2 w_{FS} + (1 \pi_2) w_{FF})$
- ► High risk task: $\Pi_B^{2H} = \pi_2 V_H (\pi_2 w_{FS} + (1 \pi_2) w_{FF}) (1 \pi_2) E$

Problem and assumptions	After failure 00●0	After success	Low risk 000	High risk 00000	Summary 0000

- Investment bank obtain the benefits V_i if successful, pays the wages, and for the high-risk task loses equity if not successful
- Low risk task: $\Pi_B^{2L} = \pi_2 V_L (\pi_2 w_{FS} + (1 \pi_2) w_{FF})$
- ► High risk task: $\Pi_B^{2H} = \pi_2 V_H (\pi_2 w_{FS} + (1 \pi_2) w_{FF}) (1 \pi_2) E$

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Task allocation

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

• The low-risk task must be profitable $\Pi_B^{2L} \ge 0$

Problem and assumptions	After failure 000●	After success	Low risk 000	High risk 00000	Summary 0000
Task allocation					

▶ The low-risk task must be profitable $\Pi_B^{2L} \ge 0$, and with $w_{FF} = 0$ we need $V_L \ge w_{FS}$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B = V_L - (w_{FS} - w_{FF}) = V_L - w_{FS} ≥ 0

Problem and assumptions	After failure 000●	After success	Low risk 000	High risk 00000	Summary 0000
Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B = V_L − (w_{FS} − w_{FF}) = V_L − w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B = V_L − (w_{FS} − w_{FF}) = V_L − w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$
- For high-risk task: $\Pi_B^{2H} = \pi_2 \left(V_H V_L \right) (1 \pi_2) E$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B/∂π₂ = V_L − (w_{FS} − w_{FF}) = V_L − w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$
- For high-risk task: $\Pi_B^{2H} = \pi_2 \left(V_H V_L \right) (1 \pi_2) E$
- If $E > rac{\pi_2}{1-\pi_2} \left(V_H V_L \right)$, then $\Pi_B^{2H} < 0$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_{∂π₀} = V_L − (w_{FS} − w_{FF}) = V_L − w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$
- For high-risk task: $\Pi_B^{2H} = \pi_2 \left(V_H V_L \right) (1 \pi_2) E$
- If $E > \frac{\pi_2}{1-\pi_2} \left(V_H V_L \right)$, then $\Pi_B^{2H} < 0$
- \Rightarrow If the losses are too high, the high-risk task is not allocated

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B = V_L (w_{FS} w_{FF}) = V_L w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$
- For high-risk task: $\Pi_B^{2H} = \pi_2 \left(V_H V_L \right) (1 \pi_2) E$
- If $E > \frac{\pi_2}{1-\pi_2} \left(V_H V_L \right)$, then $\Pi_B^{2H} < 0$
- $\Rightarrow\,$ If the losses are too high, the high-risk task is not allocated
- \Rightarrow After failure, the employee is allocated the low-risk task

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Task allocation					

- The low-risk task must be profitable Π^{2L}_B ≥ 0, and with w_{FF} = 0 we need V_L ≥ w_{FS}
 ∂Π^{2L}_B = V_L (w_{FS} w_{FF}) = V_L w_{FS} ≥ 0
- \Rightarrow Investment banks want employees to choose the highest success rate and hence $V_L=w_{FS}$
- For high-risk task: $\Pi_B^{2H} = \pi_2 \left(V_H V_L \right) (1 \pi_2) E$
- If $E > \frac{\pi_2}{1-\pi_2} \left(V_H V_L \right)$, then $\Pi_B^{2H} < 0$
- $\Rightarrow\,$ If the losses are too high, the high-risk task is not allocated
- \Rightarrow After failure, the employee is allocated the low-risk task

Problem and assumptions After failure After success Low risk High risk	Summary
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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

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	After success	High risk	
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Initial high-risk task

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk	task				

Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk	task				

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk	task				

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task, hence success or failure in period 1 would make no difference

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk	task				

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task, hence success or failure in period 1 would make no difference
- The considerations in period 2 after failure apply

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk	task				

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task, hence success or failure in period 1 would make no difference
- The considerations in period 2 after failure apply and the employee is never allocated the high-risk task

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk task

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task, hence success or failure in period 1 would make no difference
- The considerations in period 2 after failure apply and the employee is never allocated the high-risk task
- \Rightarrow Therefore, if succeeding in the high-risk task, the employee stays in this task

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial high-risk task

- Suppose after succeeding with the high-risk task, the employee is allocated the low-risk task afterwards
- If failing in period 1, he is allocated the low-risk task, hence success or failure in period 1 would make no difference
- The considerations in period 2 after failure apply and the employee is never allocated the high-risk task
- \Rightarrow Therefore, if succeeding in the high-risk task, the employee stays in this task

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Initial low-risk task

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk tasl	k				

Which task has been allocated first is irrelevant for the incentives in the second time period

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk ta	isk				

- Which task has been allocated first is irrelevant for the incentives in the second time period
- ▶ If the task is successful, the employee will be allocated the high-risk task

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk ta	ask				

- Which task has been allocated first is irrelevant for the incentives in the second time period
- ▶ If the task is successful, the employee will be allocated the high-risk task
- Similar to above, we get $w_{SF} = 0$ and $w_{SS} = V_L$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk ta	sk				

- Which task has been allocated first is irrelevant for the incentives in the second time period
- ▶ If the task is successful, the employee will be allocated the high-risk task
- Similar to above, we get $w_{SF} = 0$ and $w_{SS} = V_L$
- \Rightarrow Employees failing in time period 1 will be allocated the low-risk task in time period 2

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk ta	isk				

- Which task has been allocated first is irrelevant for the incentives in the second time period
- ▶ If the task is successful, the employee will be allocated the high-risk task
- Similar to above, we get $w_{SF} = 0$ and $w_{SS} = V_L$
- \Rightarrow Employees failing in time period 1 will be allocated the low-risk task in time period 2

Employees succeeding in time period 1 will be allocated the high-risk task in time period 2

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Initial low-risk ta	sk				

- Which task has been allocated first is irrelevant for the incentives in the second time period
- ▶ If the task is successful, the employee will be allocated the high-risk task
- Similar to above, we get $w_{SF} = 0$ and $w_{SS} = V_L$
- \Rightarrow Employees failing in time period 1 will be allocated the low-risk task in time period 2

Employees succeeding in time period 1 will be allocated the high-risk task in time period 2 $\,$

	Problem and assumptions		After success 000		High risk 00000	Summary 0000
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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits					

Assume that employees failing in period 1 are making zero profits

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits					

Assume that employees failing in period 1 are making zero profits, this ensures employees putting maximum effort into succeeding in period 1

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits					

- Assume that employees failing in period 1 are making zero profits, this ensures employees putting maximum effort into succeeding in period 1
- Profits in period 2: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2 = \pi_2 V_L C_2 = 0$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits					

- Assume that employees failing in period 1 are making zero profits, this ensures employees putting maximum effort into succeeding in period 1
- ▶ Profits in period 2: $\Pi_M^2 = \pi_2 w_{FS} + (1 \pi_2) w_{FF} C_2 = \pi_2 V_L C_2 = 0$
- This gives $C_2 = \pi_2 V_L$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 2 profits					

Assume that employees failing in period 1 are making zero profits, this ensures employees putting maximum effort into succeeding in period 1

▶ Profits in period 2:
$$\Pi_M^2 = \pi_2 w_{FS} + (1 - \pi_2) w_{FF} - C_2 = \pi_2 V_L - C_2 = 0$$

• This gives
$$C_2 = \pi_2 V_L$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

If allocated the low-risk task, the employee makes zero profits if he fails

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits

$$\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 - \pi_2) w_{SF} - C_2 \right)$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits, less the costs of effort in period 1
- $\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2 \right) C_1$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits, less the costs of effort in period 1

$$\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 - \pi_2) w_{SF} - C_2 \right) - C_1 = -C_1 < 0$$

Problem and assumptions	After failure 0000	After success	Low risk ○○●	High risk 00000	Summary 0000
Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits, less the costs of effort in period 1
- $\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2 \right) C_1 = -C_1 < 0$
- \Rightarrow Allocating the employee the low-risk task, would not be profitable to him

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits, less the costs of effort in period 1

$$\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 - \pi_2) w_{SF} - C_2 \right) - C_1 = -C_1 < 0$$

- \Rightarrow Allocating the employee the low-risk task, would not be profitable to him
- \Rightarrow The low-risk task is never allocated in time period 1

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Period 1 profits					

- If allocated the low-risk task, the employee makes zero profits if he fails
- If he succeeds, he will be allocated the high-risk task in period 2 and obtains those profits, less the costs of effort in period 1

$$\Pi_M^L = \pi_1 \left(\pi_2 w_{SS} + (1 - \pi_2) w_{SF} - C_2 \right) - C_1 = -C_1 < 0$$

- \Rightarrow Allocating the employee the low-risk task, would not be profitable to him
- \Rightarrow The low-risk task is never allocated in time period 1

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk o●ooo	Summary 0000
Optimal effort					

 \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

► To incentivize employees, they are making profits if they succeeded in period 1
 ► Profits are again Π^H_M = π₁ (π₂w_{SS} + (1 − π₂) w_{SF} − C₂) − C₁

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal effort					

- \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1
- Profits are again $\Pi_M^H = \pi_1 (\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2) C_1$
- Optimal effort levels are given from $\frac{\partial \Pi_M}{\partial \pi_1} = 0$ and $\frac{\partial \Pi_M}{\partial \pi_2} = 0$

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk o●ooo	Summary 0000

- \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1
- Profits are again $\Pi_M^H = \pi_1 (\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2) C_1$
- Optimal effort levels are given from $\frac{\partial \Pi_M}{\partial \pi_1} = 0$ and $\frac{\partial \Pi_M}{\partial \pi_2} = 0$
- With $\Delta w = w_{SS} w_{SF}$ we get

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk ○●○○○	Summary 0000

- \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1
- Profits are again $\Pi_M^H = \pi_1 (\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2) C_1$
- Optimal effort levels are given from $\frac{\partial \Pi_M}{\partial \pi_1} = 0$ and $\frac{\partial \Pi_M}{\partial \pi_2} = 0$
- ▶ With $\Delta w = w_{SS} w_{SF}$ we get
- $\blacktriangleright \quad \frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w C_2$

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk ○●○○○	Summary 0000

- \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1
- Profits are again $\Pi_M^H = \pi_1 (\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2) C_1$
- Optimal effort levels are given from $\frac{\partial \Pi_M}{\partial \pi_1} = 0$ and $\frac{\partial \Pi_M}{\partial \pi_2} = 0$

▶ With
$$\Delta w = w_{SS} - w_{SF}$$
 we get

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk ○●○○○	Summary 0000

- \blacktriangleright To incentivize employees, they are making profits if they succeeded in period 1
- Profits are again $\Pi_M^H = \pi_1 (\pi_2 w_{SS} + (1 \pi_2) w_{SF} C_2) C_1$
- Optimal effort levels are given from $\frac{\partial \Pi_M}{\partial \pi_1} = 0$ and $\frac{\partial \Pi_M}{\partial \pi_2} = 0$

▶ With
$$\Delta w = w_{SS} - w_{SF}$$
 we get

$$\frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w - C_2$$
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w$$

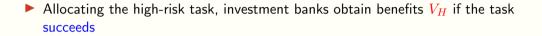
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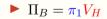
Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00●00	Summary 0000

Bank profits

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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00●00	Summary 0000
Bank profits					





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Chapter 16.2: Promotion practices Theoretical Foundations of Investment Banking Slide 20 of 25

Bank profits	Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00●00	Summary 0000
	Bank profits					

Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails

$$\square_B = \pi_1 V_H - (1 - \pi_1) E$$

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Chapter 16.2: Promotion practices Theoretical Foundations of Investment Banking

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk ○○●○○	Summary 0000
Bank profits					

- Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails
- ▶ If the task succeeds, the investment bank allocated the high-risk task in period 2

$$\Pi_B = \pi_1 V_H - (1 - \pi_1) E + \pi_1 (\pi_2 V_H - (1 - \pi_2) E - \pi_2 w_{SS} - (1 - \pi_2) w_{SF})$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Bank profits					

- Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails
- ▶ If the task succeeds, the investment bank allocated the high-risk task in period 2
- ▶ This tasks pays V_H if it succeeds and the investment bank loses E if it fails and pays the wages

$$\Pi_B = \pi_1 V_H - (1 - \pi_1) E + \pi_1 \left(\pi_2 V_H - (1 - \pi_2) E - \pi_2 w_{SS} - (1 - \pi_2) w_{SF} \right)$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Bank profits					

- Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails
- ▶ If the task succeeds, the investment bank allocated the high-risk task in period 2
- ▶ This tasks pays V_H if it succeeds and the investment bank loses E if it fails and pays the wages
- ▶ If the task fails, the investment bank allocates the low-risk task in period 2

$$\Pi_B = \pi_1 V_H - (1 - \pi_1) E + \pi_1 (\pi_2 V_H - (1 - \pi_2) E - \pi_2 w_{SS} - (1 - \pi_2) w_{SF}) + (1 - \pi_1) (\pi_2 V_L - \pi_2 w_{FS} - (1 - \pi_2) w_{FF})$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Bank profits					

- Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails
- ▶ If the task succeeds, the investment bank allocated the high-risk task in period 2
- ▶ This tasks pays V_H if it succeeds and the investment bank loses E if it fails and pays the wages
- ▶ If the task fails, the investment bank allocates the low-risk task in period 2
- \blacktriangleright This tasks pays V_H if it succeeds and the investment bank pays the wages

$$\Pi_B = \pi_1 V_H - (1 - \pi_1) E + \pi_1 (\pi_2 V_H - (1 - \pi_2) E - \pi_2 w_{SS} - (1 - \pi_2) w_{SF}) + (1 - \pi_1) (\pi_2 V_L - \pi_2 w_{FS} - (1 - \pi_2) w_{FF})$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Bank profits					

- Allocating the high-risk task, investment banks obtain benefits V_H if the task succeeds and loose E if it fails
- ▶ If the task succeeds, the investment bank allocated the high-risk task in period 2
- ▶ This tasks pays V_H if it succeeds and the investment bank loses E if it fails and pays the wages
- ▶ If the task fails, the investment bank allocates the low-risk task in period 2
- \blacktriangleright This tasks pays V_H if it succeeds and the investment bank pays the wages

$$\Pi_B = \pi_1 V_H - (1 - \pi_1) E + \pi_1 (\pi_2 V_H - (1 - \pi_2) E - \pi_2 w_{SS} - (1 - \pi_2) w_{SF}) + (1 - \pi_1) (\pi_2 V_L - \pi_2 w_{FS} - (1 - \pi_2) w_{FF})$$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal wages

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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 000●0	Summary 0000
Optimal wages					

• If $E \leq \frac{\pi_1(1+\pi_2)}{1-\pi_1\pi_2} \left(V_H - V_L \right)$ investment banks are profitable

Problem and assumptions	After failure 0000	After success 000	Low risk 000	High risk 000●0	Summary 0000
Optimal wages					

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal wages					

• The optimal wages are given from $\frac{\partial \Pi_B}{\partial \Delta w} = 0$ and $\frac{\partial \Pi_B}{\partial w_{SF}} = 0$

7i These expressions can now be solved for the optimal wages, but we will not do so here as there is no benefit in their derivation.

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Optimal wages					

• The optimal wages are given from $\frac{\partial \Pi_B}{\partial \Delta w} = 0$ and $\frac{\partial \Pi_B}{\partial w_{SF}} = 0$

• Combining this with the first order conditions of employees, $\frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w - C_2$ and $\frac{\partial C_2}{\partial \pi_2} = \Delta w$, we get

7i These expressions can now be solved for the optimal wages, but we will not do so here as there is no benefit in their derivation.

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 000●0	Summary 0000
Optimal wages					

• The optimal wages are given from $\frac{\partial \Pi_B}{\partial \Delta w} = 0$ and $\frac{\partial \Pi_B}{\partial w_{SF}} = 0$

• Combining this with the first order conditions of employees, $\frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w - C_2 \text{ and } \frac{\partial C_2}{\partial \pi_2} = \Delta w, \text{ we get}$ $\Rightarrow \frac{\partial \Pi_B}{\partial w_{SF}} = \frac{\partial \pi_1}{\partial w_{SF}} (V_H - w_{SF}) - \pi_1 = 0$ $\frac{\partial w_{SF}}{\partial \pi_1} = \pi_2 \frac{\partial \Delta w}{\partial \pi_1}$

7¿These expressions can now be solved for the optimal wages, but we will not do so here as there is no benefit in their derivation.

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 000●0	Summary 0000
Optimal wages					

• The optimal wages are given from $\frac{\partial \Pi_B}{\partial \Delta w} = 0$ and $\frac{\partial \Pi_B}{\partial w_{SF}} = 0$

► Combining this with the first order conditions of employees, $\frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w - C_2 \text{ and } \frac{\partial C_2}{\partial \pi_2} = \Delta w, \text{ we get}$ $\Rightarrow \frac{\partial \Pi_B}{\partial w_{SF}} = \frac{\partial \pi_1}{\partial w_{SF}} (V_H - w_{SF}) - \pi_1 = 0$ $\frac{\partial w_{SF}}{\partial \pi_1} = \pi_2 \frac{\partial \Delta w}{\partial \pi_1}$

• These can be solved for the wages w_{SF} and w_{SS}

7iThese expressions can now be solved for the optimal wages, but we will not do so here as there is no benefit in their derivation.

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 000●0	Summary 0000
Optimal wages					

• The optimal wages are given from $\frac{\partial \Pi_B}{\partial \Delta w} = 0$ and $\frac{\partial \Pi_B}{\partial w_{SF}} = 0$

► Combining this with the first order conditions of employees, $\frac{\partial C_1}{\partial \pi_1} = w_{SF} + \pi_2 \Delta w - C_2 \text{ and } \frac{\partial C_2}{\partial \pi_2} = \Delta w, \text{ we get}$ $\Rightarrow \frac{\partial \Pi_B}{\partial w_{SF}} = \frac{\partial \pi_1}{\partial w_{SF}} (V_H - w_{SF}) - \pi_1 = 0$ $\frac{\partial w_{SF}}{\partial \pi_1} = \pi_2 \frac{\partial \Delta w}{\partial \pi_1}$

• These can be solved for the wages w_{SF} and w_{SS}

7iThese expressions can now be solved for the optimal wages, but we will not do so here as there is no benefit in their derivation.

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 0000●	Summary 0000

Success rates

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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk ○○○○●	Summary 0000

Success rates

• Assume $\pi_1 > \pi_2$

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Problem and assumptions	After failure 0000	After success 000	Low risk 000	High risk 0000●	Summary 0000
Success rates					

• Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

Assume π₁ > π₂, then marginal costs in period 1 are higher ∂C₁/∂π₁ > ∂C₂/∂π₂
 Using the employee first order conditions, we get w_{SF} > (1 − π₂) Δw + C₂ and using Δw = V_H + E, we get

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 0000●	Summary 0000
Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get
- $\Rightarrow \Pi_B < \pi_1 (\pi_2 V_H C_2) (1 + \pi_1 \pi_1 \pi_2) E$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

• As
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$$
, we have $C_2 > \pi_2 V_H$

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

- As $\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$, we have $C_2 > \pi_2 V_H$
- ► The first term is then negative

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get
- $\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H C_2 \right) \left(1 + \pi_1 \pi_1 \pi_2 \right) E$
- ► As $\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$, we have $C_2 > \pi_2 V_H$
- The first term is then negative and the second term is positive

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

• As
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$$
, we have $C_2 > \pi_2 V_H$

▶ The first term is then negative and the second term is positive, hence $\Pi_B < 0$

 \Rightarrow If $\pi_1 > \pi_2$ investment banks would not be profitable

 \Rightarrow] i5¿We can then show that the bank profits are limited as in the formula

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

• As
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$$
, we have $C_2 > \pi_2 V_H$

- \blacktriangleright The first term is then negative and the second term is positive, hence $\Pi_B < 0$
- \Rightarrow If $\pi_1 > \pi_2$ investment banks would not be profitable
- \Rightarrow Success rates are increasing with experience
- \Rightarrow] i5¿We can then show that the bank profits are limited as in the formula

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

• As
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$$
, we have $C_2 > \pi_2 V_H$

- \blacktriangleright The first term is then negative and the second term is positive, hence $\Pi_B < 0$
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- \Rightarrow] i5¿We can then show that the bank profits are limited as in the formula

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Success rates					

- Assume $\pi_1 > \pi_2$, then marginal costs in period 1 are higher $\frac{\partial C_1}{\partial \pi_1} > \frac{\partial C_2}{\partial \pi_2}$
- ► Using the employee first order conditions, we get $w_{SF} > (1 \pi_2) \Delta w + C_2$ and using $\Delta w = V_H + E$, we get

$$\Rightarrow \Pi_B < \pi_1 \left(\pi_2 V_H - C_2 \right) - \left(1 + \pi_1 - \pi_1 \pi_2 \right) E$$

• As
$$\frac{\partial C_2}{\partial \pi_2} = \Delta w = V_H + E > V_H$$
, we have $C_2 > \pi_2 V_H$

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- \Rightarrow If $\pi_1 > \pi_2$ investment banks would not be profitable
- \Rightarrow Success rates are increasing with experience
- \Rightarrow] i5¿We can then show that the bank profits are limited as in the formula

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and model assumptions

Task allocation after failure

Task allocation after success

Initial allocation of a low-risk task

Initial allocation of a high-risk task

Summary

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	Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 0●00
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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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New employees are allocated high-risk tasks

Problem and assumptions	After failure 0000	After success 000	Low risk 000	High risk 00000	Summary 0●00

New employees are allocated high-risk tasks and only demoted to low-risk tasks if they fail to succeed

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary ○●○○
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- New employees are allocated high-risk tasks and only demoted to low-risk tasks if they fail to succeed
- With experience the success rates increase

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary ○●○○
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- New employees are allocated high-risk tasks and only demoted to low-risk tasks if they fail to succeed
- With experience the success rates increase
- The increase of the success rate is driven by the loosing the entire pay if failing in period 2

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary ○●○○
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Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary ○●○○
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		Summary
		0000

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Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Being given high responsibilities at an early stage, investment bankers will exert effort to retain these responsibilities

Problem and assumptions	After failure	After success	Low risk	High risk	Summary
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Being given high responsibilities at an early stage, investment bankers will exert effort to retain these responsibilities and continue to obtain high salaries

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 00●0
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- Being given high responsibilities at an early stage, investment bankers will exert effort to retain these responsibilities and continue to obtain high salaries
- After initial success, investment bankers will increase their efforts to ensure their careers are not jeopardised by failure

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 00●0
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- Investment banking put high pressure of success on career starters

Problem and assumptions	After failure 0000	After success	Low risk 000	High risk 00000	Summary 00●0
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Andreas Krause Department of Economics University of Bath Claverton Down Bath BA2 7AY United Kingdom

E-mail: mnsak@bath.ac.uk