Career Risk and Market Discipline in Asset Management

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Motivation

- Careers in finance, especially in asset management:
  - high compensation relative to non-finance workers
  - large discretion in risk taking $\rightarrow$ moral hazard
  - performance-related pay, but mostly indexed to upside risk
- Do asset managers also face downside risk? Is liquidation of their fund followed by
  - permanent drops in position and earnings potential?
  - job displacement?
- Does reputation in the managerial labor market play a role in shaping such career setbacks?
  - Does the "stick" provided by the labor market complement the "carrot" provided by incentive pay?

Our focus: hedge funds

- In hedge funds, all these features are particularly salient:
  - high risk taking: one bad decision may blow up a whole fund
  - large discretion in portfolio strategy $\rightarrow$ strong moral hazard
  - performance-based fees with option-like features
- This paper: do such scarring effects result from
  - "reputation losses": updated beliefs about managers' ability?
  - "accidental losses": human capital disruption due to job reallocation?

Preview of results

- Careers accelerate upon entry in the hedge fund industry: especially for employees
  - with high-quality education
  - with previous experience in asset management
  - hired to work in over-performing funds
- Hedge fund liquidations are followed by "scarring effects"
  - sharp and persistent drop in job level and earnings potential
  - more frequent switches to a new employer
  - especially for high ranking employees
- These effects are present only when
  - fund liquidation is preceded by poor relative performance
  - such under-performance persists for the 2 previous years

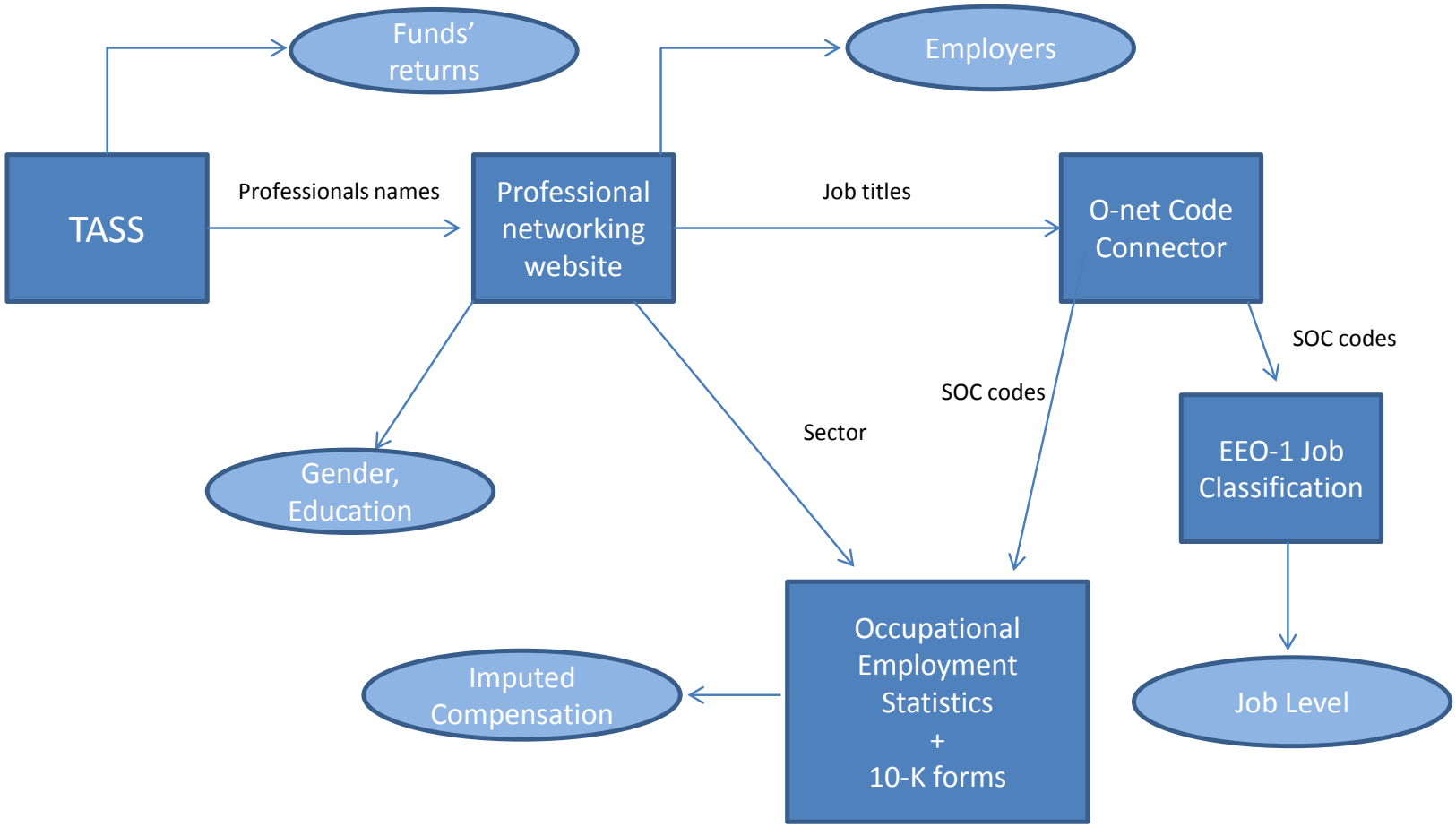
$\rightarrow$ evidence of reputation losses rather than accidental ones

Outline of the presentation

Data

- Hand-collected data about the careers of 1,948 individuals employed at some point by a hedge fund company:
  - at low-level, mid-level or top managerial positions
  - while in hedge fund industry, employment relationship is with **investment company**, not fund
  - but we do observe for which fund(s) the employee works
- For each employee: gender, education level and quality, year of entry in the labor market, all job changes within and across firms
  - Individuals work also in other sectors (e.g., commercial banks, non-financial companies)
- Employment histories span from 1963 to 2016

Data sources

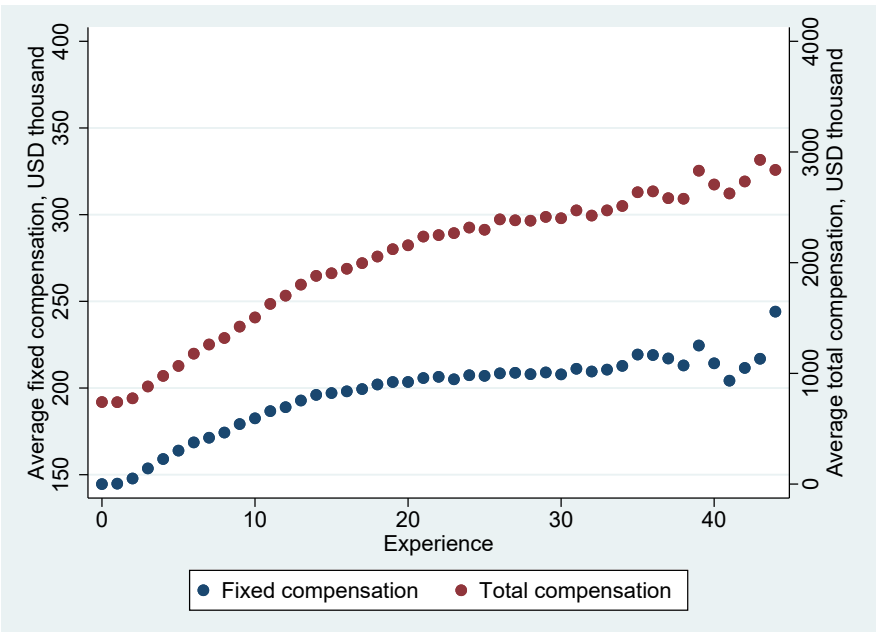


Job levels

Job Level	Description	Average Imputed Compensation	Examples of job titles
6	CEOs	3,707,831	CEO, executive director, founder, managing director, managing partner
5	Top executives	1,590,858	CFO, CIO, COO, CRO, deputy CEO, partner, vicepresident
4	First/Mid Officers & Managers	158,150	director of sales, head of investor relations, investment manager
3	Professionals	105,694	analyst, portfolio manager
2	Technicians, Sales Workers, Administrative Support Workers	101,851	trader, credit officer
1	Craft Workers, Operatives, Labors & Helpers, Service Workers	53,845	assistant, intern

Imputed compensation

- Imputed compensation varies across occupations and sectors:
  - (i) asset management, (ii) commercial banking; (iii) financial conglomerates; (iv) insurance; (v) other finance; and (vi) non-financial firms and institutions
- For job levels 1-4: only fixed compensation, drawn from OES data
- For levels 5 and 6: also variable component, drawn from 10-Ks and proxy statements



▸ Career path by cohort

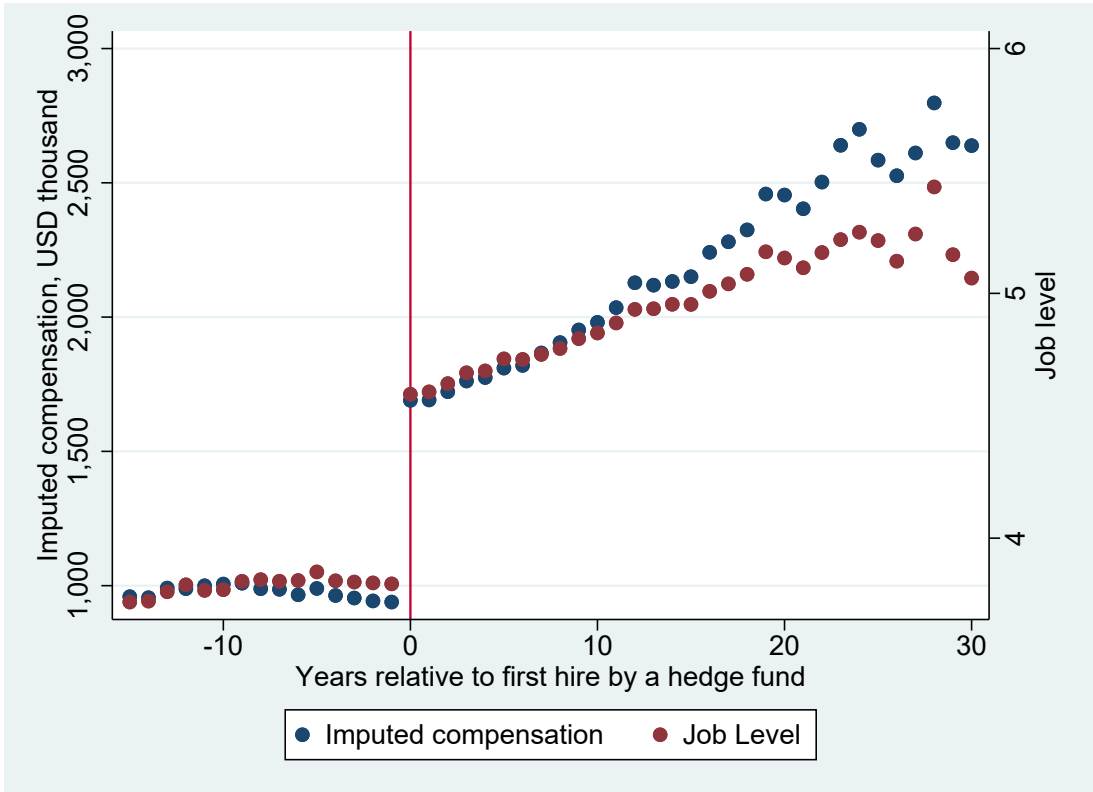
Employee characteristics

- They all have a university degree, but of different qualities
- Sample is dominated by males (83%), consistently with much evidence about gender imbalance in finance

	Obs.	Mean	Median	St. Dev.
Education Level				
High school	1948	0.00	0	0.05
College	1948	0.39	0	0.49
Master	1948	0.41	0	0.49
JD or PhD	1948	0.03	0	0.18
Subject of highest degree				
Econ or Finance	1948	0.59	1	0.49
Science or Engineering	1948	0.08	0	0.27
Quality of highest degree institution				
Ranked top 15	1948	0.16	0	0.37
Ranked 16-40	1948	0.06	0	0.24
Ranked below 40	1948	0.44	0	0.50
Cohort				
1962-1979	1948	0.04	0	0.20
1980-1989	1948	0.22	0	0.41
1990-1999	1948	0.46	0	0.50
2000-2013	1948	0.28	0	0.45
Male	1889	0.83	1	0.37

Entry in the hedge fund industry

- Upon entering the hedge fund industry, average imputed compensation rises by about \$700,000 (left axis) and the job level by almost 1 notch (right axis)



Entering the hedge fund industry: job level

Dependent variable: Job Level upon hiring				
	(1)	(2)	(3)	(4)
Education quality	0.320***	0.402***	0.300**	0.251*
	(0.090)	(0.148)	(0.145)	(0.144)
Experience	0.017***	0.026***	0.020**	-0.006
	(0.006)	(0.008)	(0.008)	(0.011)
Exp. in AM	0.025***	0.024**	0.029***	0.030***
	(0.007)	(0.010)	(0.010)	(0.010)
Female	-0.731***	-0.512***	-0.520***	-0.508***
	(0.074)	(0.101)	(0.105)	(0.105)
Previous Job Level	0.117***	0.130***	0.134***	0.128***
	(0.018)	(0.027)	(0.028)	(0.029)
Past Performance		0.090***	0.063**	0.058**
		(0.025)	(0.024)	(0.024)
Past Benchmark		0.122	0.075	-0.020
		(0.078)	(0.076)	(0.074)
log(AUM)			0.005	0.005
			(0.026)	(0.026)
Constant	3.990***	3.554***	4.251***	4.545***
	(0.060)	(0.124)	(0.517)	(0.515)
Cohort FEs	No	No	No	Yes
Fund Style	No	No	Yes	Yes
Observations	1936	779	720	720

Career advance upon entry differs across individuals

- Having a graduate degree from a top-15 university is associated with greater career advancement
- Positive and strong relation with the employee's experience, especially in asset management
- Women advance less than men: consistent with Bertrand, Goldin and Katz (2010) and Bertrand and Hallock (2001)
- Job level change is positively and significantly correlated with the previous relative performance of the hedge fund...
- ... but not with the performance of the fund's class or with the fund's size

Careers after liquidations

- Upon liquidation of a hedge fund, are the careers of employees working for that fund negatively affected ("scarring effects")?

- Are scarring effects larger for:
  - high-level employees?
  - employees of companies that manage several funds?

- Two hypotheses:

  1. fund liquidation reflects a revised assessment of managers' skill: scarring effects reflect a *reputation loss*
  2. fund liquidation is not related to its relative performance: scarring effects reflect an *accidental loss* of fund-specific human capital

▸ Definition of liquidation

Scarring effects of liquidations

- Problem in assessing scarring effects: assortative matching
  - liquidated funds may be managed by less able employees
  - these would have a lackluster career even without a liquidation
- We combine diff-in-diff with matching to compare the career paths of "similar employees" before and after liquidation, and estimate:

$$y_{it} = \alpha_i + \lambda_t + \sum_{k=-5}^{+5} \theta_k L_{it}^k + \epsilon_{it},$$

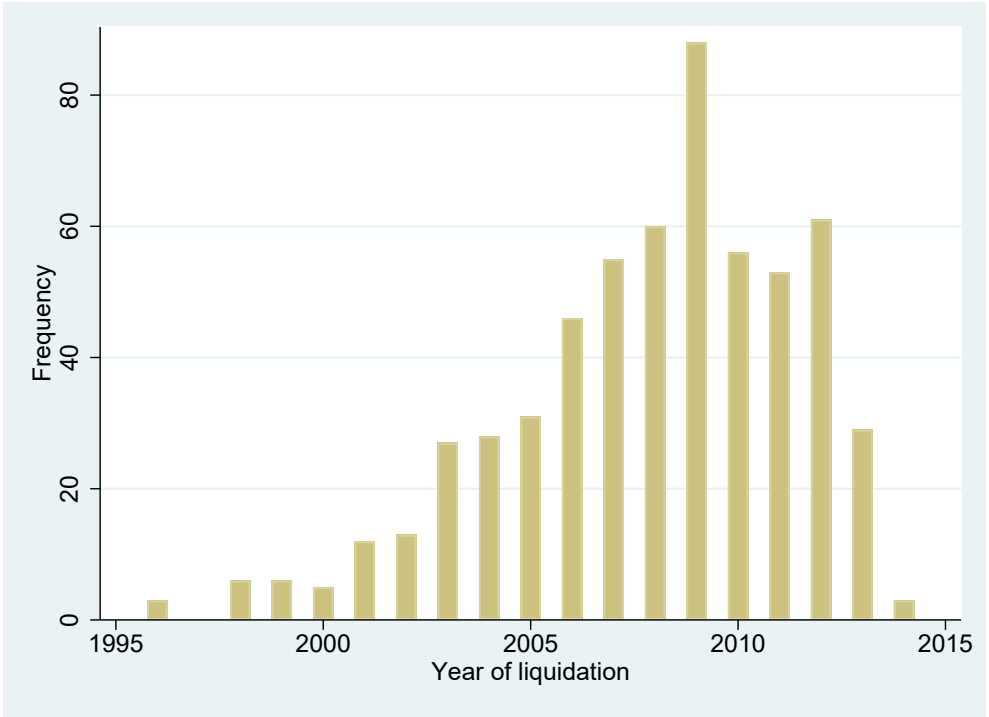
  - y_{it} is the outcome of interest: job level, salary, job switch
  - α_i and λ_t are individual and time fixed effects
  - L_{it}^k are leads and lags of the 1^{st} liquidation faced by employee i (working for fund at any time in the 2 years before liquidation)

Empirical strategy

- Individual fixed effects α_i account for any unobserved characteristic with time-invariant impact on career outcomes
- Time effects λ_t control for shocks that are common to individuals affected by liquidations and unaffected ones
- Matching $\rightarrow$ λ_t's are estimated off individuals "similar" to those who face liquidations (valid counterfactual)
- Each individual is matched with a control who works in asset management in the year before liquidation, with a propensity score based on education level and quality, experience, pre-liquidation job level and change

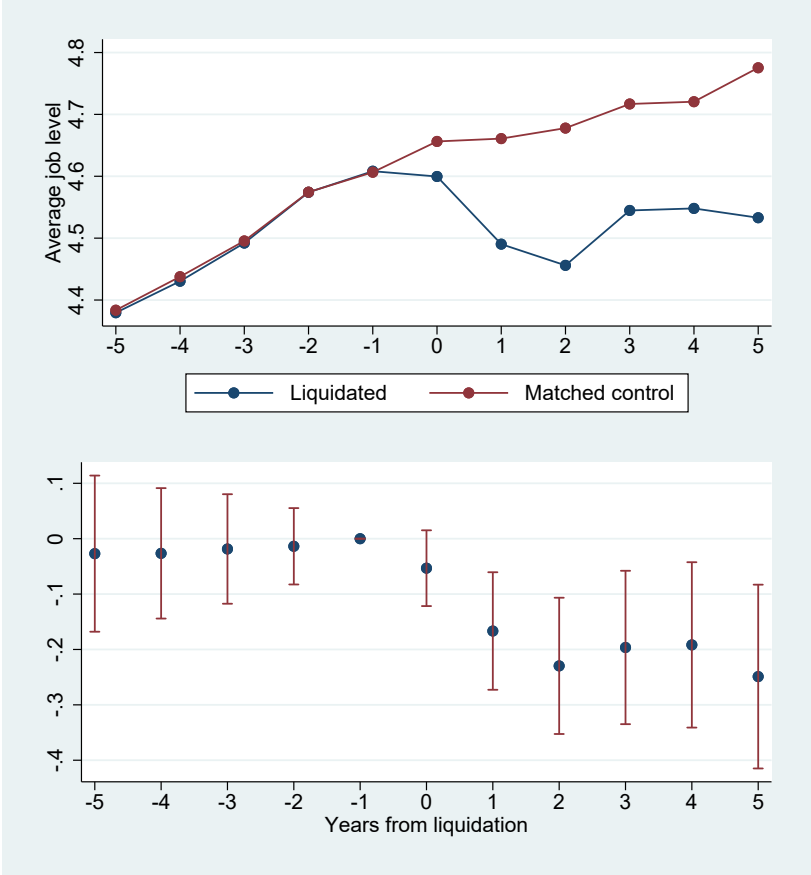
Variation in timing of liquidation events

- We also exploit variation in the timing of our 582 liquidations
- External validity of the estimates: any scarring effect is not simply the reflection of financial crisis



- Many liquidations also before and after the Great Recession
- Indeed our results are robust to the exclusion of 2008-09

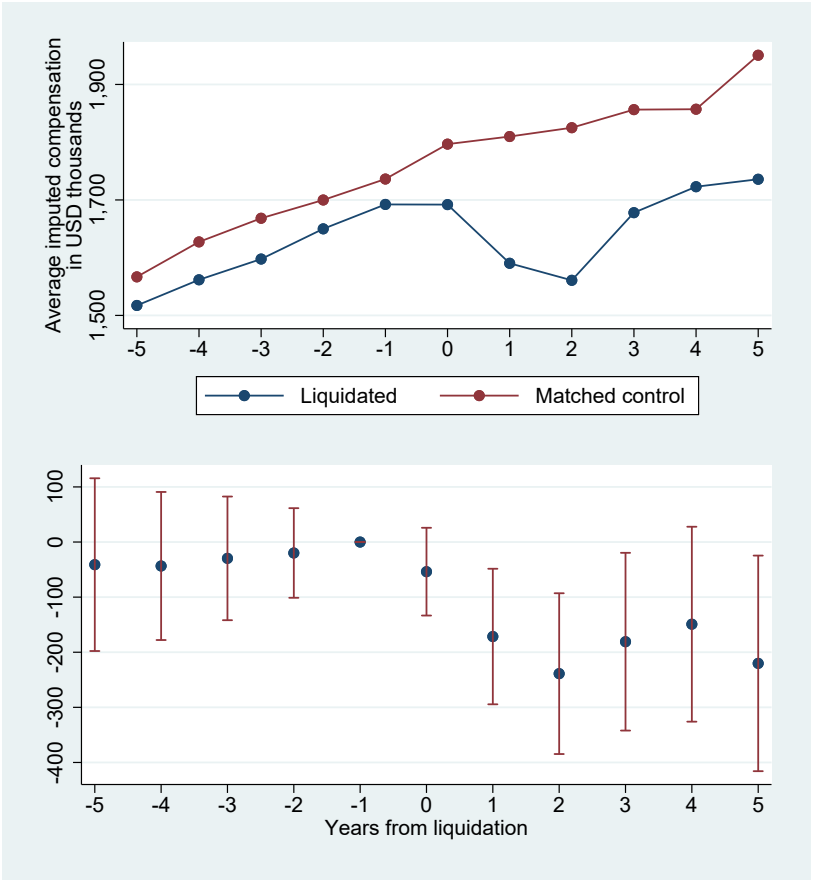
Persistent drop in the job level



- Point estimates of θ_k = diff-in-diff in period k relative to the pre-liquidation year (θ_{-1} is normalized to 0)
- No pre-trends: job level growing in sync prior to liquidation
- The **job level drops by 0.2 notches**: significant and persistent

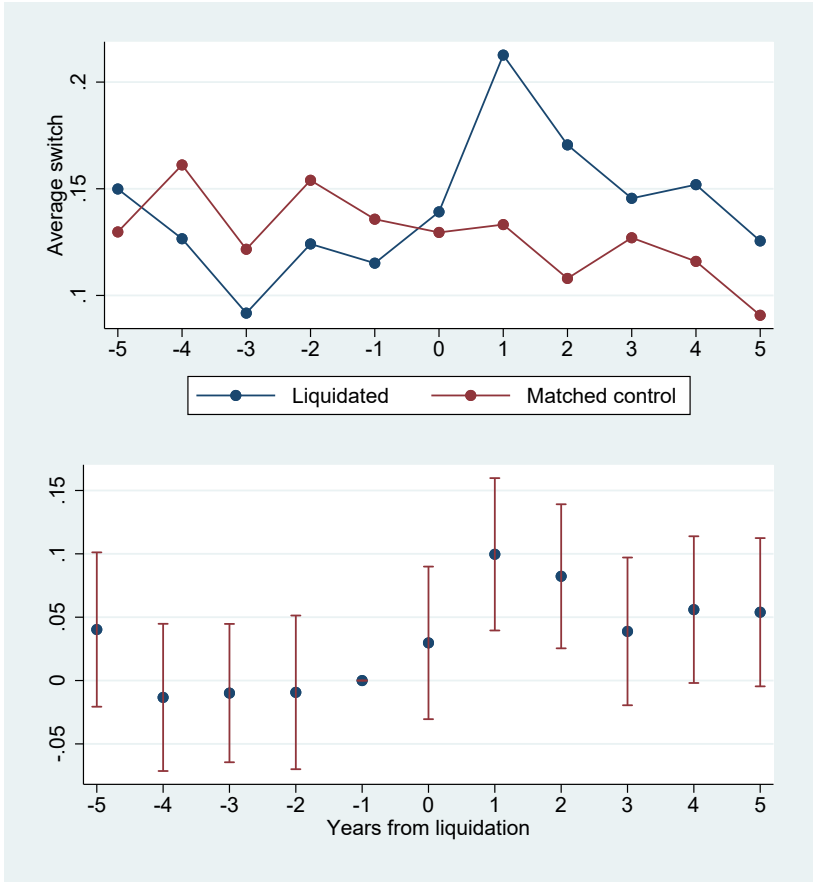
Persistent drop in imputed compensation

- **Imputed compensation drops by about $200,000**



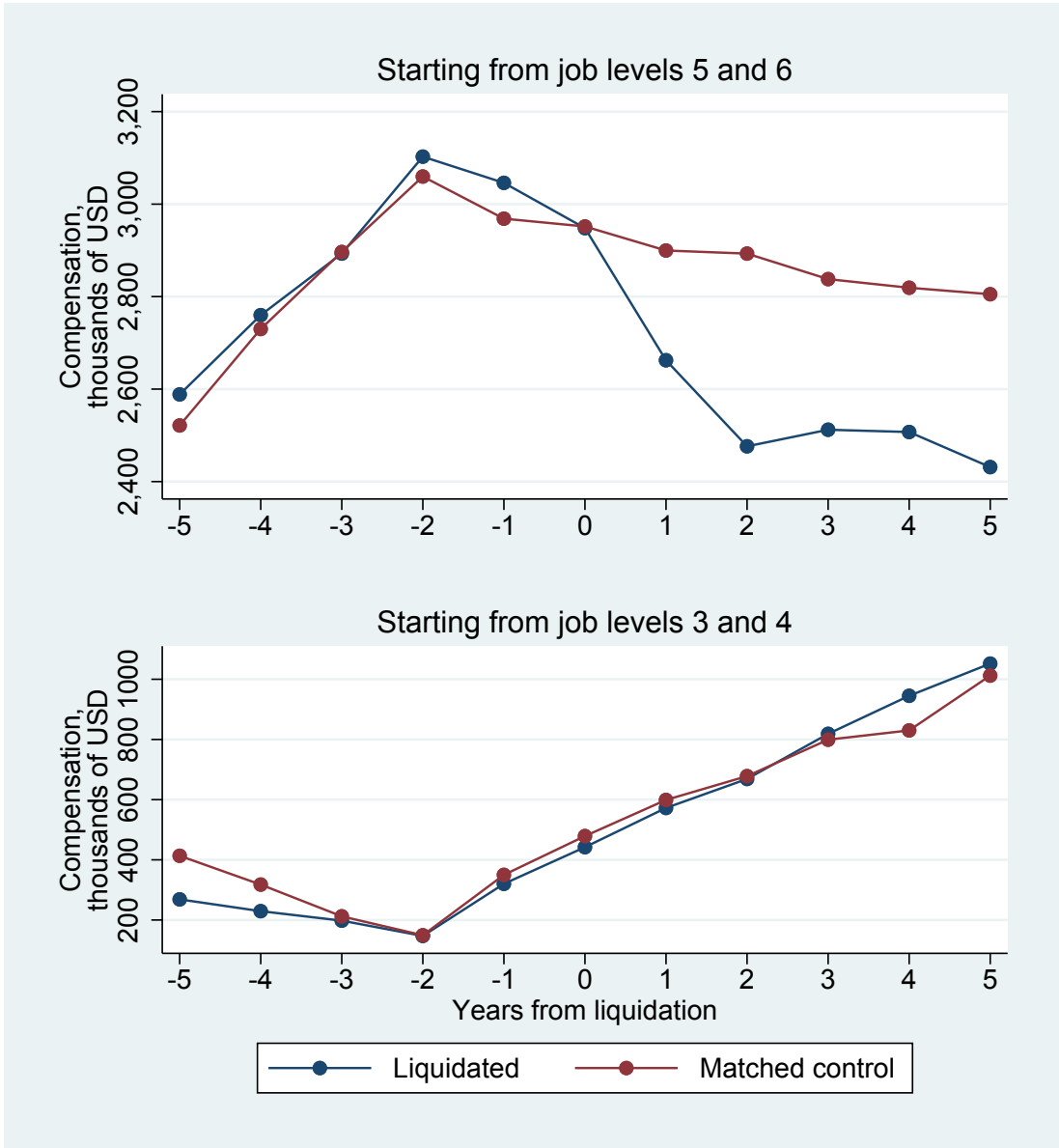
Increase in probability of switching company

- The **probability of switching company rises by 10 percentage points** in the year following liquidation



Are scarring effects larger for high-ranking employees?

Career paths by initial job level around liquidation



Note: 76 employee pairs at level 3, 166 at level 4; 81 at level 5 and 211 at level 6

Scarring effects by initial job level

$$y_{it} = \alpha_i + \lambda_t + \beta_1 L_{it}^{post} + \beta_2 L_{it}^{post} \times Top_i + \epsilon_{it}$$

	Job Level	Imputed Comp. thousands of USD	Switch
	(1)	(2)	(3)
L^{post}	-0.059	81.550	0.051**
	(0.091)	(102.585)	(0.021)
$L^{post} \times Top$	-0.202*	-450.668***	0.019
	(0.116)	(140.575)	(0.026)
Observations	11026	10808	11026

$L_{it}^{post} = 1$ for 5 years after liquidation, 0 otherwise

Standard errors clustered at individual level in parentheses

- Consistent with different explanations:
  - top guys are held responsible for the liquidation: their "reputation loss" is greater than for other employees
  - they have more fund-specific human capital at stake or face higher search frictions: their "accidental loss" is greater

Causes of scarring effects

We present a dynamic **model** with moral hazard and adverse selection where liquidation can occur for one of two reasons:

1. **persistently poor relative performance** $\rightarrow$ manager's reputation drops $\rightarrow$ too expensive to incentivize him $\rightarrow$ after liquidation, manager is not hired elsewhere: **reputation losses**
2. **shocks unrelated to manager's skill and effort**: fund liquidation triggers career slowdown also if it is **accidental**:
   - wider market turbulence, e.g. drop of the relevant benchmark
   - reorganization of parent company, e.g. restructuring of its hedge fund family

Reputation or accidental loss?

Scarring effects are present only for funds with **persistently poor** relative performance (P^-) before liquidation

$$y_{it} = \alpha_i + \lambda_{gt} + \delta_1 L_{it}^{post} + \delta_2 L_{it}^{post} \times P_i^- + \epsilon_{it}$$

	Job Level	Imputed Compensation, thousands of USD	Switch
	(1)	(2)	(3)
	Panel A: 1 year pre-liquidation performance		
Liquidation	-0.154	-59.986	0.063***
	(0.119)	(144.281)	(0.024)
Liquidation × Poor Performance	-0.010	-157.939	-0.011
	(0.138)	(167.939)	(0.028)
	Panel B: 2 years pre-liquidation performance		
Liquidation	0.118	158.613	0.047*
	(0.123)	(159.313)	(0.028)
Liquidation × Poor Performance	-0.349**	-420.808**	0.010
	(0.141)	(179.519)	(0.032)
Observations	10687	10492	10687
No. professionals	1028	1023	1028

Pre-liquidation performance: relative or absolute?

- The results are driven by negative *relative* performance, not absolute performance
- It still holds even if one retains *only* liquidations that follow positive *absolute* performance:

	Job Level	Compensation, thousands of USD	Switch
	(1)	(2)	(3)
L^{post}	0.240	237.890	0.004
	(0.178)	(240.870)	(0.036)
$L^{post} \times P^{-}$	-0.388*	-535.401*	0.047
	(0.217)	(280.011)	(0.046)
Observations	3804	3723	3804

Standard errors clustered at individual level in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Are reputation losses present only for top employees?

	Job Level	Imputed Compensation, thousands of USD	Switch
	(1)	(2)	(3)
	Panel A: Starting from job levels 5 and 6		
Liquidation	0.083	134.787	0.043
	(0.136)	(185.985)	(0.037)
Liquidation × Poor performance	-0.437***	-663.634***	0.032
	(0.160)	(218.858)	(0.041)
Observations	5512	5475	5512
No. professionals	524	524	524
	Panel B: Starting from job levels 3 and 4		
Liquidation	0.029	109.933	0.068
	(0.194)	(243.862)	(0.044)
Liquidation × Poor performance	0.000	26.780	-0.031
	(0.219)	(271.245)	(0.051)
Observations	4238	4117	4238
No. professionals	410	406	410

Are reputation losses a source of market discipline?

Our **model** suggests that reputation losses are a source of **market discipline** if:

1. liquidations are mostly performance-related: 79% in our data
2. the scarring effects of non-performance related liquidations are small: in our data there are no scarring effects following these liquidations

$\rightarrow$ our **evidence** is consistent with the presence of labor market discipline in hedge fund industry

Summary and conclusions

1. Finance professionals experience a great acceleration in their career upon entry in the hedge fund industry
2. But they face significant career setbacks and job reallocation following the liquidation of the fund they work for
3. These scarring effects apply only to
   - high-ranking employees
   - following persistently poor performance
   - relative to the fund's benchmark
4. Consistent with labor market discipline, complementing firm-level incentives: it may compensate for pay packages' tendency to reward success rather than penalize failure

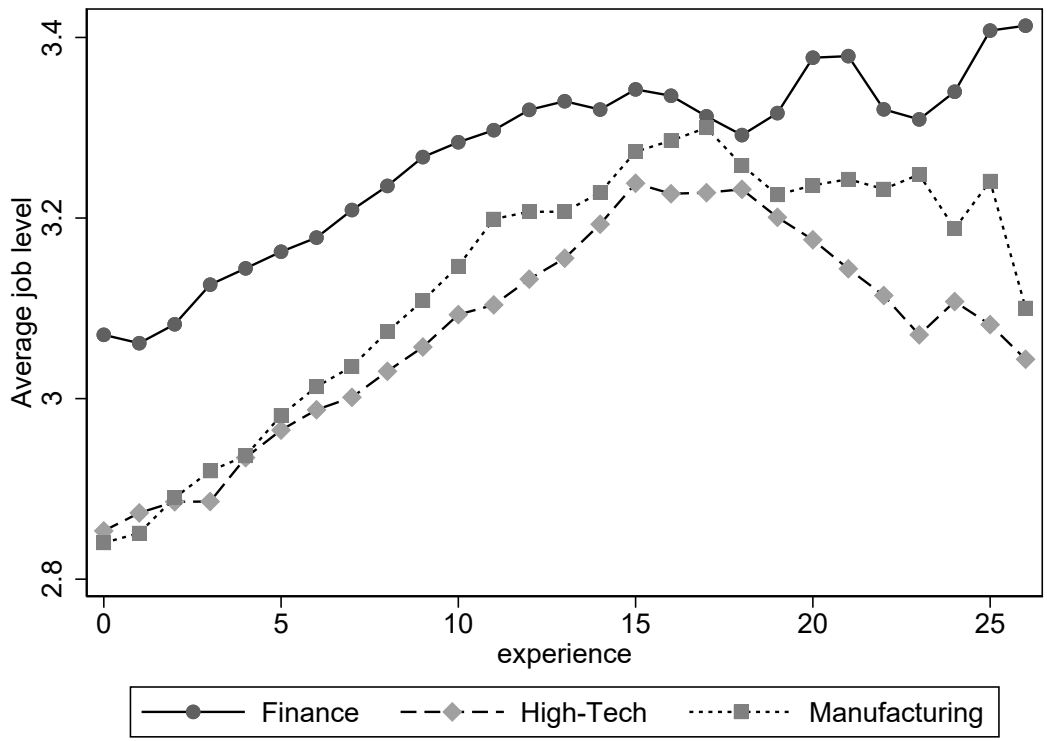
Future work

- Research question: how do macro shocks influence the career paths of workers in finance, technology and manufacturing?

- Data: resumes from major professional networking website for workers in finance (2992), high-tech (3077) and manufacturing (2919), spanning from 1960 to 2018

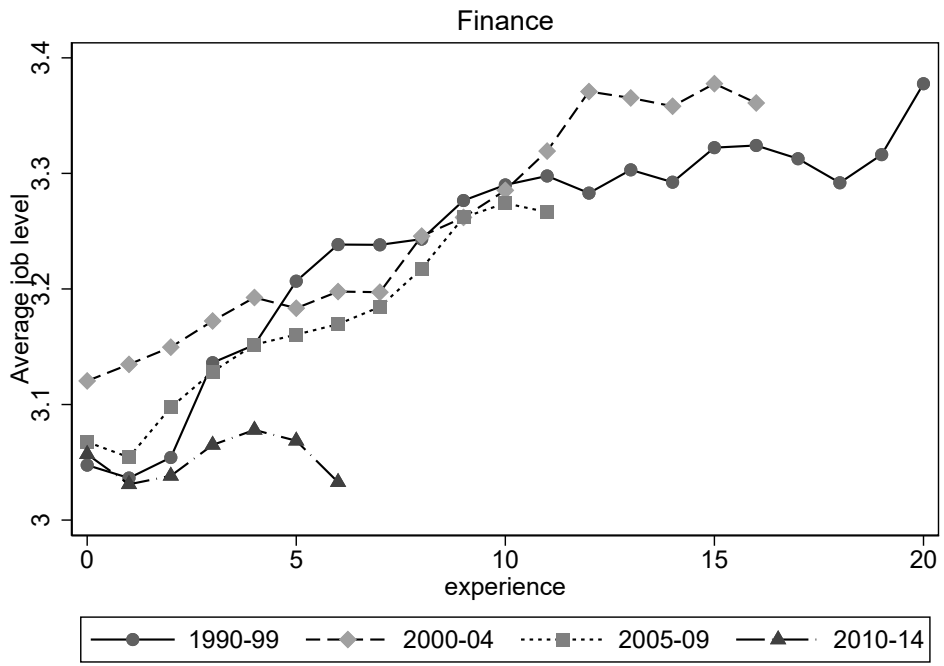
Career paths in finance, high-tech and manufacturing

- Careers in finance are faster: individuals start from higher levels and on average reach higher positions in the job ladder



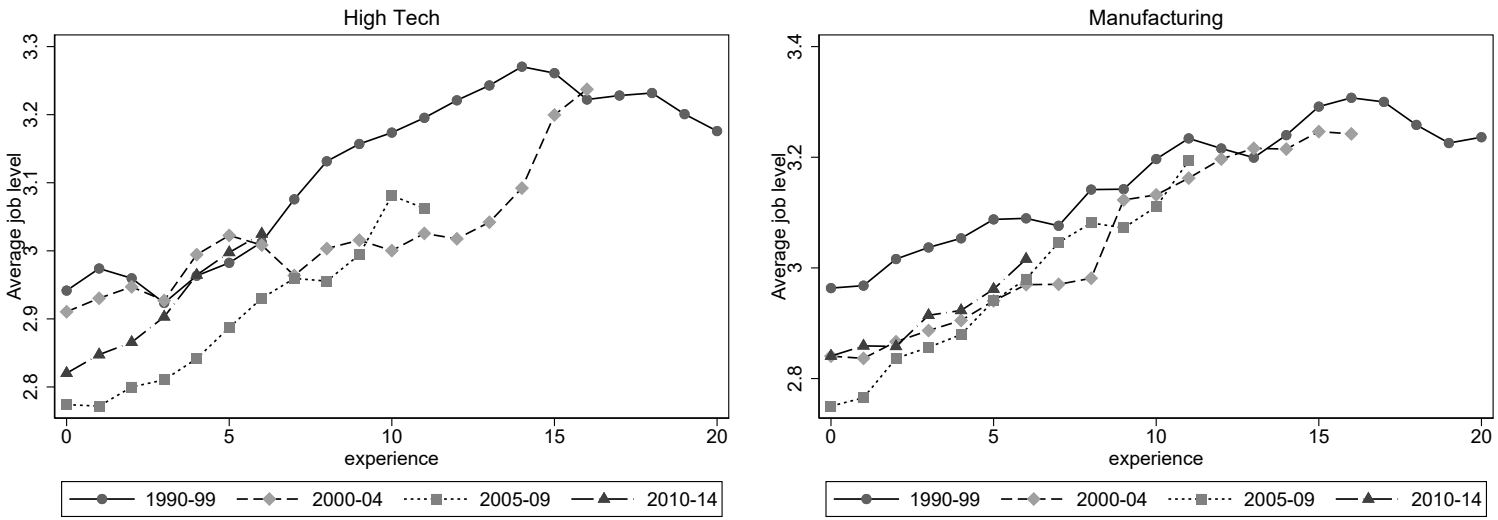
Evolution of career paths in finance...

- The career path of finance workers slows down in the last decade



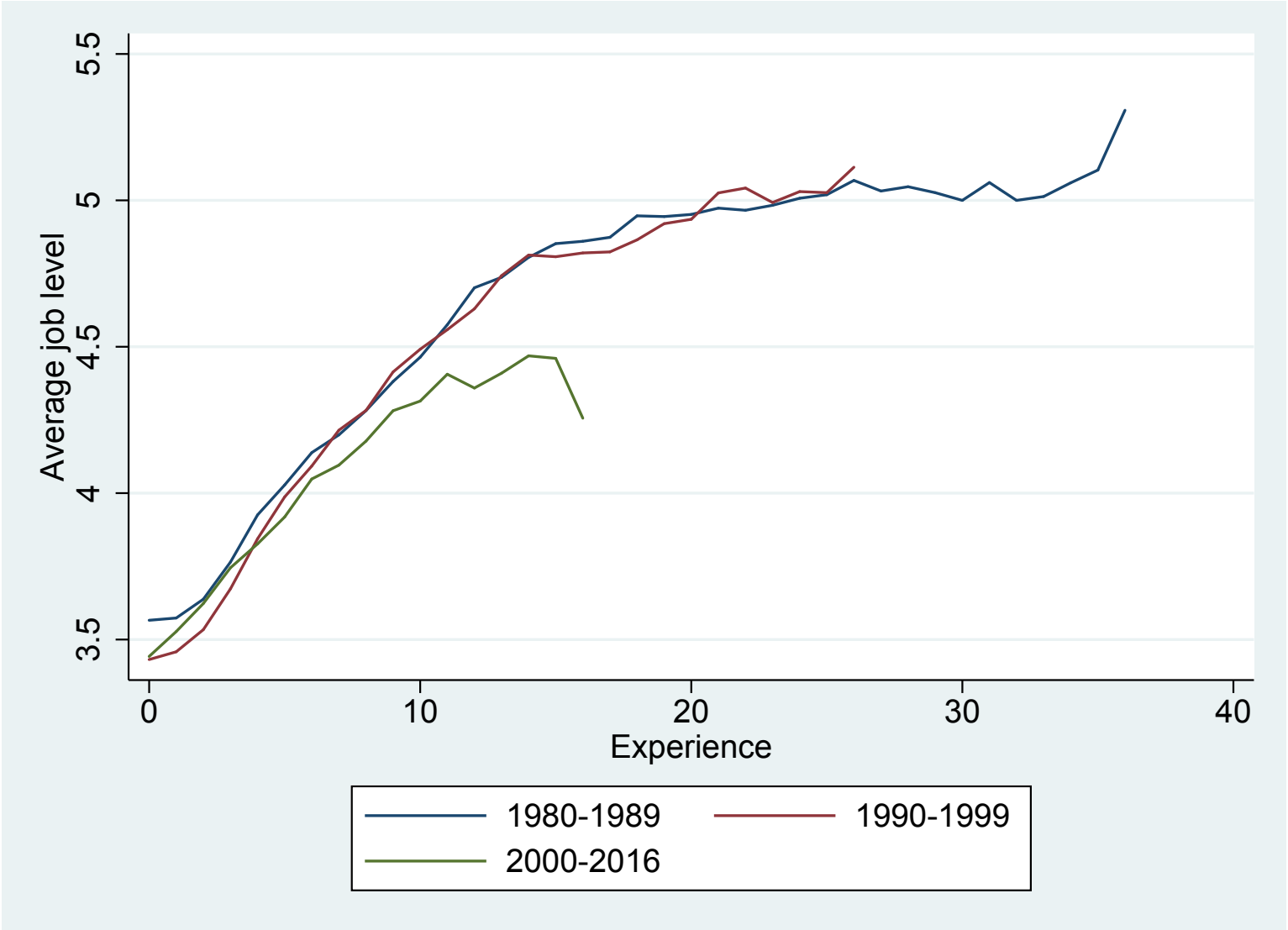
... High-tech, and manufacturing

- Careers slowdown earlier in high-tech and manufacturing



Thank you!

Career paths by cohort



▸ Go back

What is a fund liquidation?

- Identified using the "dropreason" variable in the TASS database
- 8 reasons why funds exit the TASS population of "live" funds:

1. "fund liquidated": 48.44%
2. "fund no longer reporting": 22.33%
3. "unable to contact fund": 18.58%
4. "fund has merged into another entity": 6.02%
5. "fund closed to new investment": 0.96%
6. "fund dormant": 0.59%
7. "programme closed": 0.54%
8. "unknown": 2.54%

- We find no significant career changes after funds are terminated for reasons 4, 5, 6 and 7

Go back