

# Quantitative Analysis of Audit Fees

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# Topics

- Determinants of Audit Fees
- Is there any difference between U.S. and Japan?
  - Size of Auditees
  - Complexity of Auditees
  - Risk of Auditees
  - Major Auditors, and Price-Differences
  - Other Factors (Busy Season Premium)

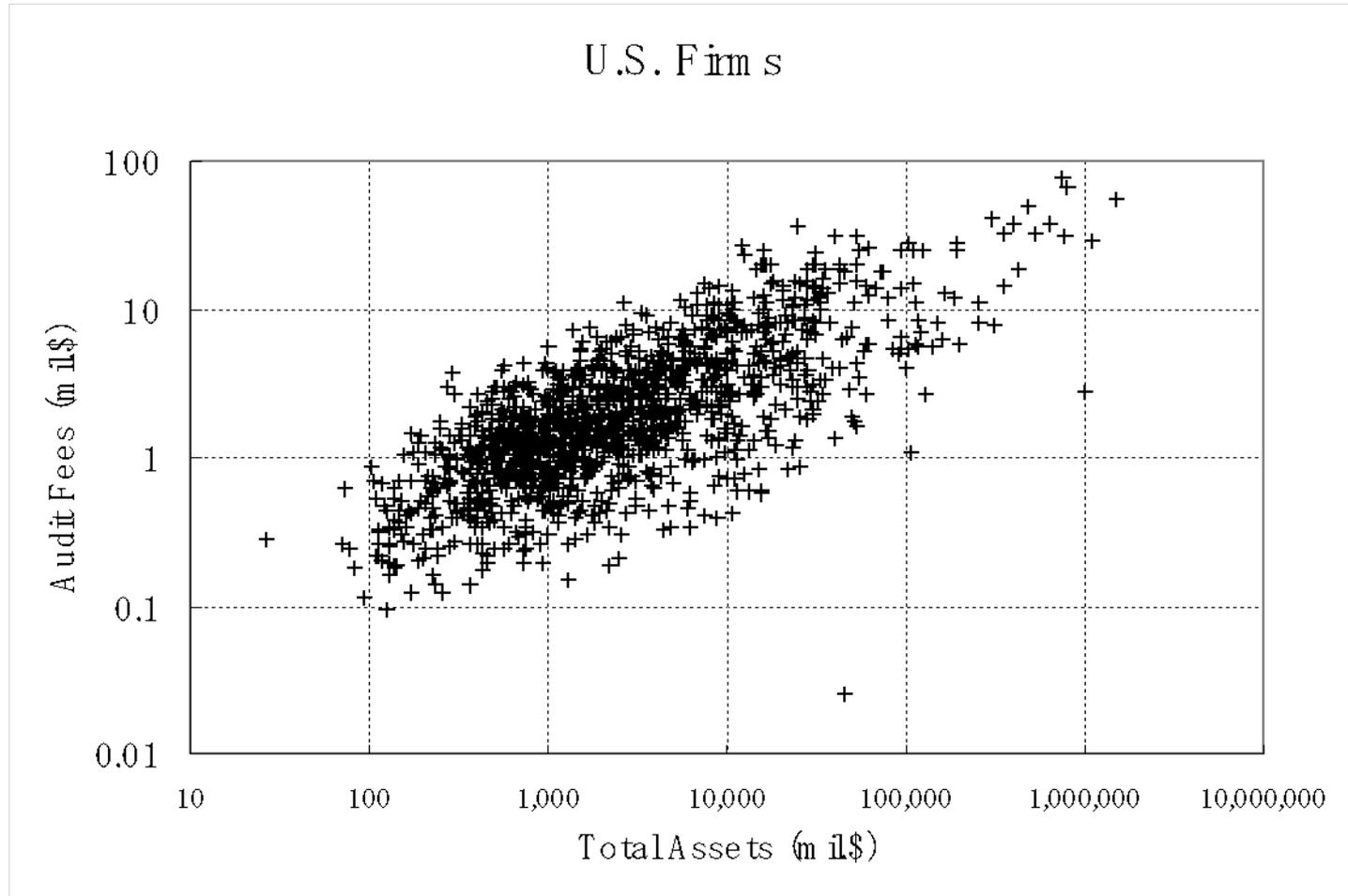
# Audit Fees and Asset Size

	Asset	Audit Fees		+ Other Fees	
	\$m il	\$m il	%	\$m il	%
Toyota Motor	221,227	7.8	0.0035	17.0	0.0077
NTT	173,623	14.4	0.0083	16.1	0.0093
Tokyo Electric Power	124,989	1.3	0.0010	1.6	0.0013
Nissan Motor	89,532	4.6	0.0052	4.7	0.0052
Hitachi	88,511	13.8	0.0156	16.5	0.0186
Sony	86,355	17.6	0.0204	30.1	0.0349
Honda Motor	84,700	8.4	0.0099	15.1	0.0178
Mitsubishi Corp	83,181	6.8	0.0082	8.8	0.0106
Matsushita Electric	73,244	1.9	0.0026	2.6	0.0035
Mitsubishi & Co.	69,031	11.8	0.0171	17.6	0.0255

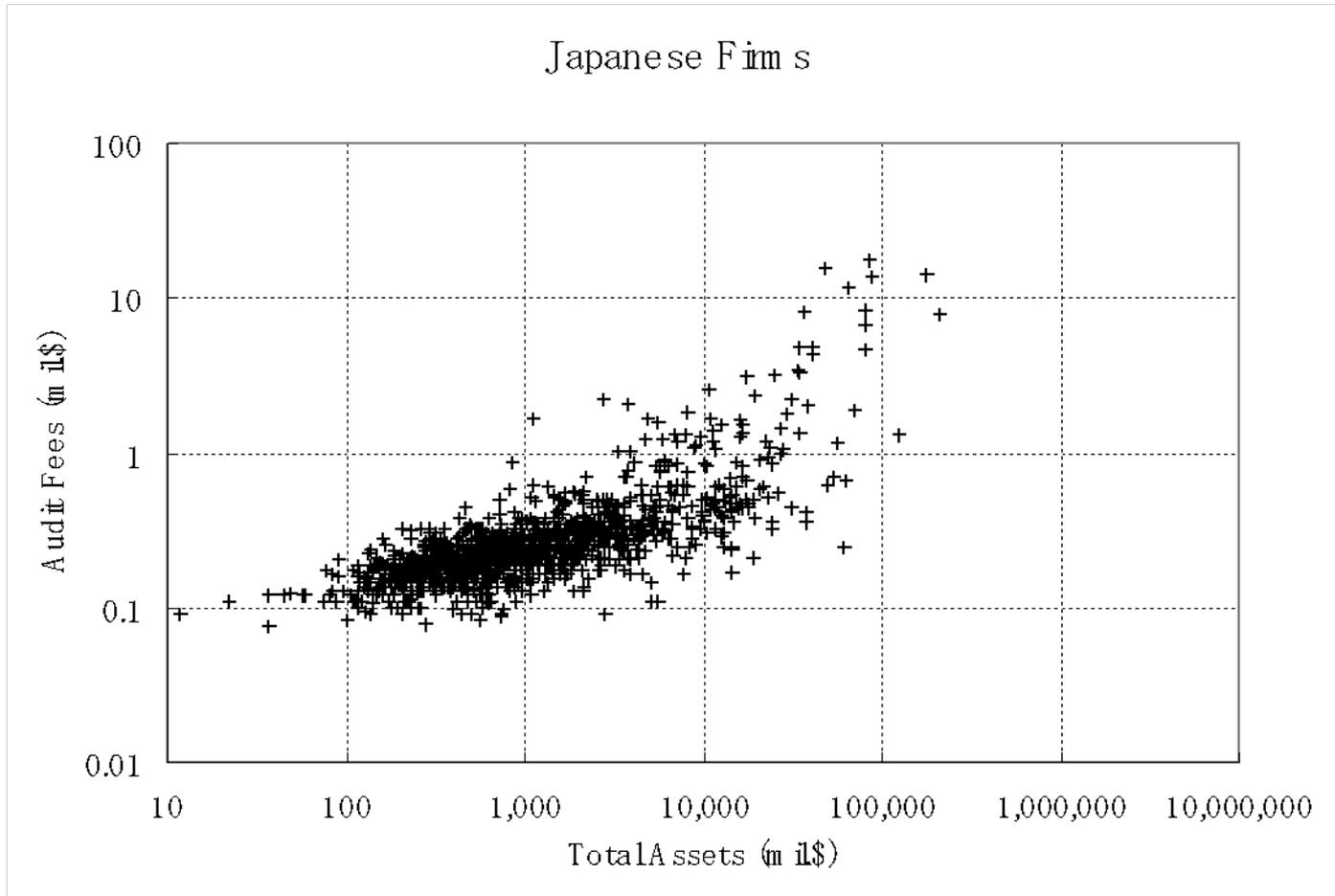
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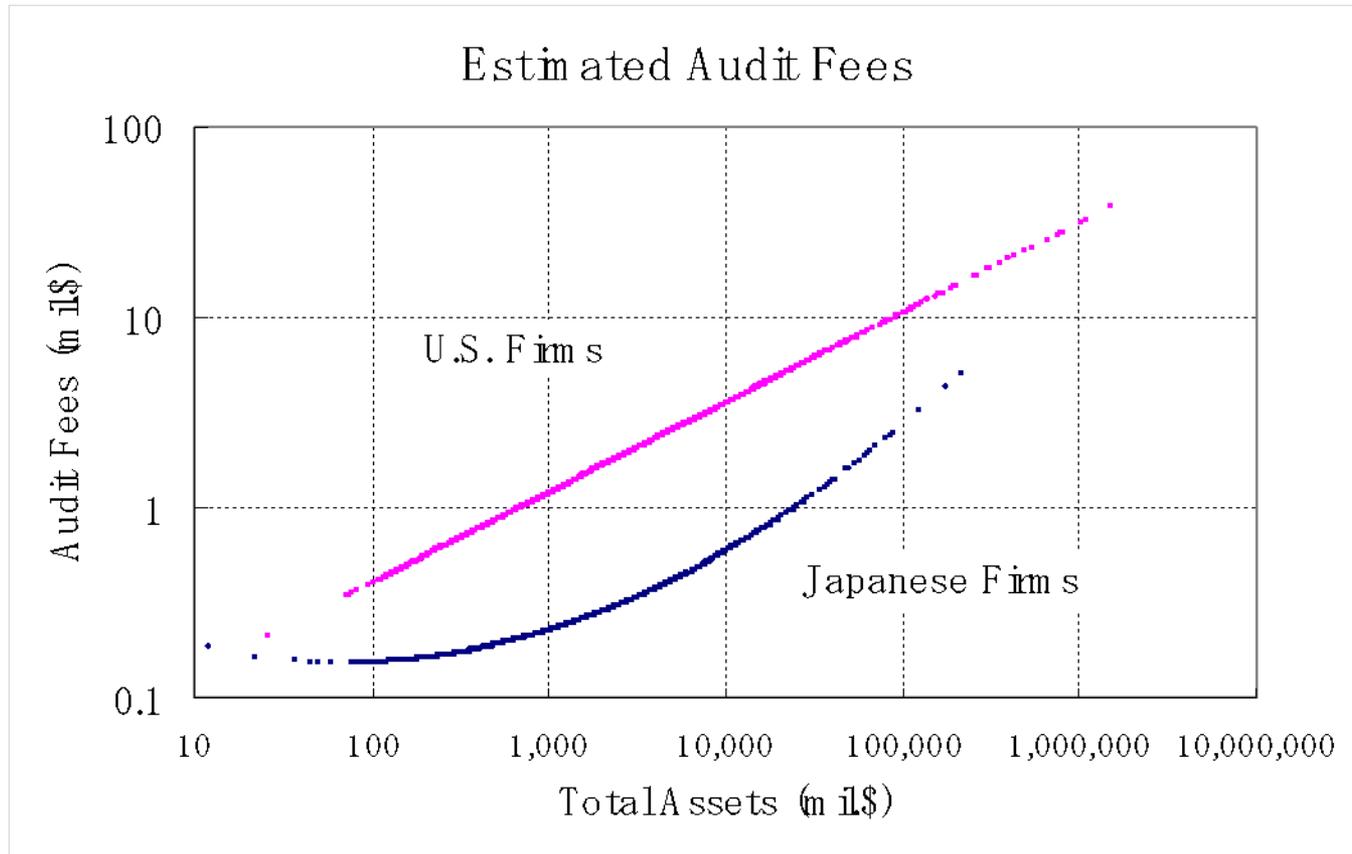
# Audit Fees and Asset Size



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# Audit Fees and Complexity

- B/S
  - Inventory-Asset Ratio, and A/R-Asset Ratio
  - Quick Ratio, and Current Ratio
- Number of Subsidiaries
  - Data was not available for U.S. firms
  - For Japanese firms, the effect is confirmed.

# Audit Fees and Risk

- Risk measure from B/S
  - Does firm with losses pay higher audit fees?
  - Statistically confirmed.
- Risk measure from stock market
  - Does firm with larger stock price variation pay higher audit fees?
  - Variations of the stock prices are not important.

# Audit Fees and Auditors

- Is there “Big-4” premium?
- Is there any price difference between major auditors?
- U.S.
  - PricewaterhouseCoopers, Ernst&Young, Deloitte&Touche, KPMG
- Japan
  - Azusa, Shin-Nihon, Chuo-Aoyama, Tomatsu

# Audit Fees and Auditors

- Run regression models, and test the equality of relevant coefficients
- U.S.
  - Can reject the equality hypothesis.
- Japan
  - Cannot reject the equality hypothesis.
- This may indicate that the pricing in Japan is more harmonized than in the U.S.

# Other Factors

- Busy Season Premium
  - 73% of U.S. firms ended their accounting year in December.
  - 84% of Japanese firms ended their accounting year in March.
  - Statistically confirm in the U.S., not in Japan.

# Conclusion

- Determinants of Audit Fees
  - Size seems to be the most important factor.
  - Complexity is also important.
  - Risk effect from B/S is clear.
  - Big-4 premium exists.
    - Difference between auditors are negligible.
  - Busy season premium does not exist in Japan.