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Silent Partners: Corporate Ownership, Risk, and the Gender Asset Gap in Antebellum New England[†]

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Recent research on gender differences in risk bearing contends that women's preferences are inherently more risk averse than men, potentially owing to such intrinsic factors as cognitive and psychological traits (Borghans et al. 2009). Entrepreneurial ventures require the ability to manage risk, and conventional thinking similarly holds that women's lower business ownership in part reflects greater risk aversion. At the same time, historical evidence points to exogenous constraints on women's economic choices, such as "protective" laws that limited their ability to earn incomes, trade, contract, and hold property on their own account.[1] Khan (1996) was the first to quantitatively assess nineteenth-century married women's property laws, finding that reforms in these restrictive legal rules significantly increased women's economic participation in the high-risk realm of inventive activity and innovation. Another confounding factor arises because women's involvement in entrepreneurship and enterprise has largely remained invisible owing to inadequate records and unregistered participation within family firms (Khan 2016).

Contrary to the narrative of risk-averse women, throughout US history, many have followed Abigail Adams's principle of "nothing ventured, nothing have." Such entrepreneurs as Maine-born Margaret Knight (inventor of a revolutionary paper-bag machine and cofounder of the Eastern Paper Bag Company) and Helen Blanchard (the Blanchard Overseam Company) leveraged their patented ideas into nationally successful firms (Khan 2020). Similarly, Maria Beasley licensed her profitable barrel-making inventions to Standard Oil and helped to establish multiple innovative enterprises including the Beasley Standard Barrel Manufacturing Company. Other enterprising women encountered the downside of risk in the form of business failure and forced liquidation.

Capital mobilization during industrialization was also promoted by "silent partners," or female investors in both new and established corporations in emerging industries. Women have stereotypically been linked to conservative investments in bank assets. When the York Bank of Maine was first incorporated in 1831, its major founding shareholder was the wealthy widow Sarah Cleaves acting on her own accord. However, women's corporate ownership was not confined to the banking sector. Nancy Covell owned 74 of the 80 shares in the Jay Bridge corporation, and 11 of the 14 founders of the Achorn Lime Rock Company of Rockland were women from one extended family. Polly Clapp Lewis (1780–1865) is unknown to history, but she was a millionaire in her own right, with extensive holdings in diverse companies and real estate assets in several New England states. Lewis was notably the largest stockholder in the Springvale Manufacturing Company, a high-risk textile firm that had been spun off in 1842 from the troubled and heavily indebted Sanford Company.

I. Corporate Shareholders Sample

This study investigates the representativeness of such women in business based on a unique sample of approximately 42,500 investors identified in complete shareholder lists for all 202 corporations in

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[1] Maine began to introduce more liberal laws regarding women's economic rights starting in the 1820s (Khan 1996). By 1844, married women had gained their unconditional rights to separate property, as well as the ability to fully engage in contracts and trade on their own account. Single women and widows had the same legal rights as men.

Maine drawn at five-year intervals between 1840 and 1860. Each shareholder was matched with records from the manuscript population censuses, providing individual-level information on age, occupations, household size, and marital status, as well as wealth. It is important to note that scholars have generally depended on the censuses of 1860 and 1870 for estimations of real and personal wealth, but these shareholder data now reveal that the census entries for personal wealth are highly inaccurate and unreliable for both men and (especially) women. As such, this suggests a need to reconsider prior conclusions about the distribution of wealth, inequality, and women's economic standing in the nineteenth century.

Between 1840 and 1860, Maine was undergoing rapid industrialization, and the number of firms, shareholders, and the value of investments in business corporations correspondingly increased markedly (Khan 2022). By 1855, total paid-in capitalization in these firms amounted to over $15.5 million. Enterprise structures ranged from closely held manufacturing corporations to the Atlantic and St. Lawrence railroad, which was owned by 5,777 shareholders. Over the course of economic development, a process of "investor education" was underway, leading to an increase in local ownership. Banks, which benefited from decentralized information and monitoring, were predominantly owned by in-state residents. By contrast, manufacturing and railroad enterprises were initially owned by out-of-state stockholders, but access to local funding grew, in part due to increasing participation by women investors.

Table 1 provides summary statistics for investments by gender over time in the banking, manufacturing, and transportation sectors. Women accounted for about 18 percent of shareholders, a fraction that increased over time. Women's investment profiles differed significantly from those of men, even after controlling for such factors as marital status and household size. As might be predicted, the average and total value of their holdings were lower than those of men. At the same time, the patterns of shareholding differed by gender in perhaps unexpected ways, as the empirical analysis indicates that women investors assumed higher business risk than their male counterparts in a number of dimensions.

II. Portfolio Allocation by Gender and Risk

First, we observe a shift in female ownership toward riskier assets as the economy became more industrialized. The share of women investors increased in all sectors, amounting to almost one-quarter of total stockholders in 1855. Wealthier shareholders, irrespective of gender, gravitated toward potentially profitable but risky manufacturing corporations with concentrated ownership, which were less likely to pay regular dividends, and offered shares with high par values that lacked liquidity as they were not traded on organized exchanges. At the same time, there was a democratization of investors in transportation, which attracted small shareholders, especially younger women. The proportion of female shareholders doubled in transportation, a volatile sector with frequent contagious bankruptcies, indicating greater assumption of risk.

Second, the composition and degree of risk in individual portfolios differed significantly by gender. Unexpectedly, women held a greater fraction of their total real and personal wealth in corporate shares. Figure 1 illustrates how such equity intensity diverged for men and women by age profile, in part driven by variation in real estate holdings. It is interesting to note that equity intensity was significantly lower for married men, owing to their greater real estate ownership. Over the life cycle, the higher equity intensity of female portfolios was maintained, and the divergence between the allocation of assets by men and women grew until past middle age.

Firm-specific risk is negatively related to the number of assets in a portfolio, other things being equal. Table 2 therefore presents another gauge of risk and diversification in terms of the number of different firms in which each individual shareholder invested. This measure also varies significantly by gender, with higher risk associated with female portfolios. For instance, in 1855, only 3.3 percent of women shareholders held stock in 4 or more firms, compared to 10.4 percent of male investors. Women's ability to diversify across multiple firms was most likely constrained by lower discretionary income, especially in an era when their labor market participation was limited. In short, these patterns together indicate a skew in female ownership toward investment strategies with greater risk, holding

Table 1—Shareholding and Portfolio Composition, by Gender and Sector, 1840–1855

	1840	1845	1850	1855
Banks				
Female percent investors	19.8	23.1	27.7	25.9
Female percent share value	11.9	14.8	18.3	16.3
Female average share value	812.7	714.9	714.9	679.9
Male average share value	1,489.3	1,231.3	1,266.4	1,218.6
Female equity percent portfolio	90.8	89.6	88.1	87.9
Male equity percent portfolio	62.9	54.4	53.7	53.9
Manufacturing				
Female percent investors	–	9.0	10.0	15.3
Female percent share value	–	5.0	5.7	13.7
Female average share value	–	1,614.9	1,834.1	4,550.1
Male average share value	–	3,088.2	3,376.8	5,213.7
Female equity percent portfolio	–	82.8	83.7	79.9
Male equity percent portfolio	–	59.6	61.0	65.0
Transportation				
Female percent investors	–	8.8	10.8	16.4
Female percent share value	–	6.1	8.7	9.8
Female average share value	–	428.9	428.8	492.5
Male average share value	–	635.4	544.5	891.7
Female equity percent portfolio	–	86.7	89.4	90.5
Male equity percent portfolio	–	73.9	63.7	67.0
All sectors				
Total no. of shareholders	3,174	6,370	13,071	19,872
Number female	563	835	1,737	3,549
Female percent investors	17.7	13.1	13.3	17.9
Female percent share value	11.9	9.6	9.8	13.4
Female average share value	812.7	693.2	681.9	986.3
Male average share value	1,489.3	1,140.2	1,051.5	1,593.1
Female equity percent portfolio	90.8	88.4	88.5	88.2
Male equity percent portfolio	62.9	64.8	61.5	62.0

Notes: Published shareholder lists for 1840 only covered banks. Value refers to the par value of shares held by the investor. Percent of investors/share value refers to the percentage in each sector owned by shareholders in the particular gender category. The portfolios measure total assets as the sum of equity from the shareholder lists and real estate assets from the census. The equity percent of portfolio variable comprises the value of shares relative to total assets. The first three panels indicate the value of shares held in that sector as a percent of total wealth, which would underestimate the equity intensity of investors holding shares in multiple sectors.

other things (such as ownership of fixed income securities) constant. These results are consistent with the notion that such economic decision-making might reflect differences in market access and opportunity sets rather than gender-specific risk aversion or intrinsic preferences (Schubert et al. 1999).

Women shareholders tended to be single (unmarried or widowed) with smaller households, suggesting greater autonomy in decision-making. At the same time, kinship ties played a disproportionately important role for women and other relatively disadvantaged groups of investors (Khan 2022). Women were far more likely than men to be related to other shareholders in the same firm, a pattern that increased in all industries over time (Table 3). This was especially true of the transportation sector, where women's familial investing increased from 47.5 percent in 1845 to 78.5 percent in 1855. Railroads and other risky large-scale undertakings attracted extensive shareholding that primarily consisted of small first-time investors who were part of family networks. The likelihood of business failure was significantly lower in firms with related investing, and women with family connections exhibited greater persistence in holding shares over the long term. Such networks may have attenuated information asymmetries and other transactions costs that influenced risk exposure, enhancing the ability of inexperienced women investors to shift their capital beyond banking.

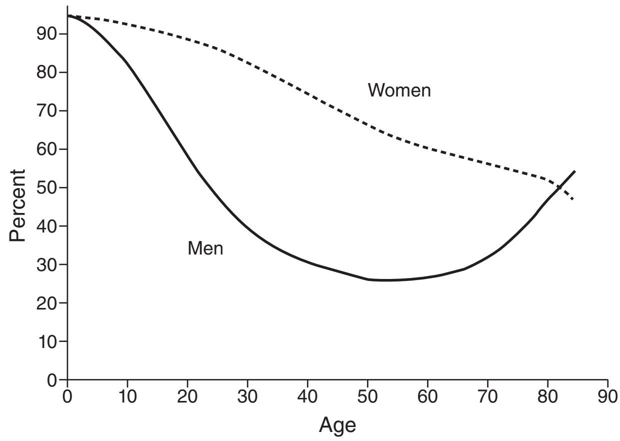

FIGURE 1. EQUITY INTENSITY IN ASSET PORTFOLIOS OVER THE LIFE CYCLE, BY GENDER

Note: This polynomial spline function offers a smoothed plot of the portfolio composition of men and women, comprising equity holdings as a percentage of total assets over the life cycle.

TABLE 2—DIVERSIFICATION ACROSS FIRMS IN PORTFOLIO BY GENDER, 1840–1855

	1840	1845	1850	1855
Women				
1 firm (observations)	106	266	640	995
(percent)	70.7	79.6	80.7	73.8
2 firms (observations)	27	48	102	220
(percent)	18.0	14.4	12.9	16.3
3 firms (observations)	11	13	33	89
(percent)	7.3	3.9	4.2	6.6
4+ firms (observations)	6	7	18	45
(percent)	4.0	2.1	2.3	3.3
All women (observations)	150	334	793	1,349
(percent)	15.3	16.2	16.2	23.0
Men				
1 firm (observations)	598	1,274	3,048	2,746
(percent)	72.1	73.6	74.2	60.8
2 firms (observations)	136	280	616	877
(percent)	16.4	16.2	15.0	19.4
3 firms (observations)	52	101	249	423
(percent)	6.3	5.8	6.1	9.4
4+ firms (observations)	44	75	195	470
(percent)	5.3	4.3	4.7	10.4
All men (observations)	830	1,730	4,108	4,516
(percent)	84.7	83.8	83.8	77.0

Notes: This table shows the number/percent of shareholders by the number of firms in their investment portfolio in the stated year. In 1840, the coverage is limited to banks, whereas the rest of the period includes all corporations.

The logistic regression in Table 4 assesses the firm-specific and personal factors that influenced the probability of shareholding by women relative to men. The results confirm the previous findings. Women's investing was positively correlated with more established firms (time since date founded) and companies with higher capitalization and larger numbers of shareholders. Female

Table 3—Related Investors by Industry and Gender

	1845		1850		1855	
Industry	Men	Women	Men	Women	Men	Women
Banks						
Percent related	35.4	59.0	43.3	51.2	43.1	50.7
Manufacturing						
Percent related	34.0	60.0	39.3	62.5	41.9	61.1
Transportation						
Percent related	39.7	47.5	66.7	68.8	65.8	78.5
Observations	2,123	385	3,585	582	5,533	1,681
Percent related	30.4	57.9	56.4	60.0	54.0	66.0

Note: "Percent related" refers to the column percentage of (male, female) investors who were related by family ties to other investors within a specific firm in that sector.

Table 4—Logistic Regression: Probability of Shareholding by Women Relative to Men

−3.28 intercept (1.64)	−0.18 population (0.14)	–0.31 local resident (0.15)	+0.27 capitalization (0.07)	−1.53 manufacturing (0.29)
−1.03 transportation (0.23)	+0.03 firm age (0.01)	–0.79 closely held (0.64)	+0.44 related (0.11)	−1.57 married (0.11)
–0.11 household size (0.01)	+0.13 investor age (0.02)	–0.001 age-squared (0.00)	+3.29 equity percent (0.14)	

Likelihood: 1517.04
R^2: 0.44

Notes: Standard errors in parentheses. The regression includes year fixed effects, and banking is the excluded sector. Closely held firms were owned by fewer than ten shareholders. "Related" implies the investor was related to another shareholder in the same firm. Investor age, marital status, and household size were identified by the census. The equity percent of the portfolio comprises the par value of shares held relative to total assets.

shareholders were more likely than men to be related investors, and their marital status tended to be single (unmarried or widowed) with smaller households. Even after controlling for such factors, women's investment-by-age profiles differed significantly from that of men. Alternative specifications (not reported here) indicate that equity intensity was especially lower for married men, owing to greater real estate ownership, while all empirical estimations confirm the higher equity intensity of women's portfolios.

III. Conclusion

The extent of women's independent involvement in business enterprise matters, since it is well established that individual welfare is not identical to household welfare (Khan 1996). To date, quite limited and unrepresentative samples have motivated claims that women investors were exceptionally risk averse, confining their investments to safe banking shares and deposits and avoiding ownership in riskier ventures such as railroads and manufacturing corporations. By contrast, this study uncovers more extensive contributions by women to economy-wide capital mobilization in the early industrial era than previously realized.

Economists today categorically claim that women are inherently more risk averse than men. However, this empirical analysis of representative financial data on shareholding during early industrialization reveals that investment strategies by women were associated with higher risk in several dimensions. These results thus provide a useful reminder that divergent outcomes in the assumption of risk by gender can occur because of variation in preferences or because of constraints on choices.

In particular, women were more likely to encounter distinct external constraints on their financial decision-making and asset management that affected observed gender-specific differences in outcomes. Such patterns suggest a need to further explore the degree to which economic behavior and risk bearing are influenced by contexts, constraints, and opportunity sets that vary by gender.

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