Title: An econometric analysis of inventory turnover performance in U.S. retail services

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## Abstract:

Inventory turnover varies widely across retailers and over time. This variation undermines the usefulness of inventory turnover in performance analysis, benchmarking and working capital management. This talk is based on two papers. In the first paper, we develop an empirical model using financial data for 311 public-listed U.S. retail firms for the years 1987-2000 to investigate the correlation of inventory turnover with gross margin, capital intensity and sales surprise (the ratio of actual sales to expected sales for the year). The model explains 66.7% of the within-firm variation and 97.2% of the total variation (across and within firms) in inventory turnover. It yields an alternative metric of inventory productivity, Adjusted Inventory Turnover, which empirically adjusts inventory turnover for changes in gross margin, capital intensity and sales surprise, and can be applied in performance analysis and managerial decision-making. It also yields estimates of time-trends in inventory productivity in the U.S. retail sector, and shows that both these measures have declined during 1987-2000.

In the second paper, we examine whether adjusted inventory turnover is correlated with superior long-term financial performance. Using a fourfactor stock returns model, we find that adjusted inventory turnover has a statistically significant correlation with risk-adjusted stock returns for U.S. retail firms for the twenty-year period from 1984 to 2003. Our results support the use of adjusted inventory turnover as a benchmarking metric for inventory productivity, and show the importance of inventory productivity in retailing.