

# The Undrawn Credit Line Premium

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## Abstract

This paper studies the cross-sectional relationship between corporate undrawn credit line holdings and expected returns. I document that firms with more undrawn credit lines earn 3.88 – 5.74% higher returns than firms with fewer undrawn credit lines. To rationalize this finding, I incorporate the major features of credit line contracts into the investment-based asset pricing framework to illustrate a novel risk-based mechanism: firms with larger idiosyncratic liquidity needs endogenously hold more undrawn credit lines to preserve flexible and cheap liquidity. However, due to credit line revocations that strongly correlate with aggregate economic conditions, they become more exposed to aggregate shocks, yielding the positive undrawn credit line premium.

## Background, Research Question, and Motivation

- Background: Credit line is the largest debt category (credit card for firms)



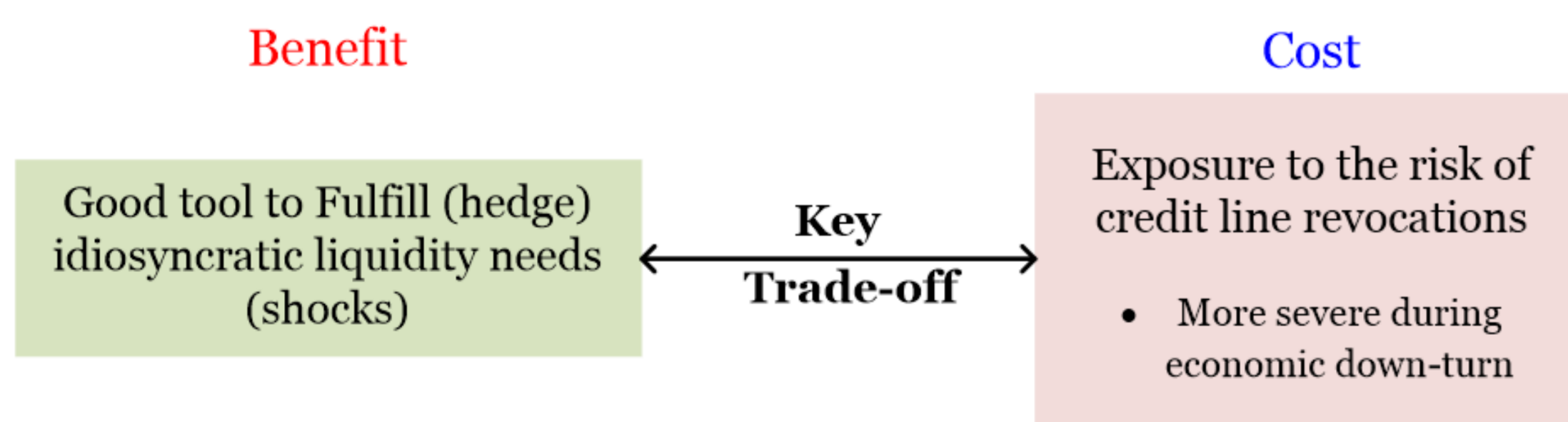
- Research Question: What's the AP implication of corporate undrawn credit line holdings in the cross-section? and why?

- Motivation: unexplored asset pricing implications of UCL

- Important: vast amount of credit lines are undrawn
  - Average  $\frac{UCL}{Total\ Asset}$  of 13%
- Interesting: non-trivial asset pricing implication
  - Common intuition: more UCL  $\Rightarrow$  more options + larger debt capacity  $\Rightarrow$  lower risk?
  - Surprising findings: more UCL is associated with higher risk and expected stock returns

## Overview

- Main findings:
  - Empiric: significant positive UCL premium (3.88 – 5.74% p.a.)
  - Theory: a novel risk-based explanation + an invest.-based AP model
- Intuition of the explanation
  - Holding UCL increase firm's exposure to aggregate shocks



- Takeaway:
  - important risk implications of UCL holding (unused credit capacity)
  - a downside of holding UCL for liquidity management:
    - lower valuation / higher cost of equity

## Empirical Findings

### Portfolio Sorting Results

- Sorted on firms' UCL / different variables within industries

Panel A: Total Assets (AT)						
	Low	2	3	4	High	High-Low
Excess Return (pp)	8.51	9.91	9.21	10.65	12.38	3.88
t-stat.	2.57	2.89	2.56	2.70	3.58	3.41
SR	0.64	0.70	0.61	0.68	0.89	0.60
Panel B: Total Debt						
Excess Return (pp)	7.03	9.86	10.16	10.72	12.77	5.74
t-stat.	1.79	2.81	3.24	2.98	3.01	3.26
SR	0.47	0.74	0.72	0.73	0.76	0.63
Panel C: Property, Plant and Equipment (PPENT)						
Excess Return (pp)	8.32	10.28	8.81	10.91	12.67	4.35
t-stat.	2.62	2.77	2.43	3.10	3.41	2.55
SR	0.63	0.69	0.61	0.74	0.82	0.54

- Significant positive undrawn credit line premium

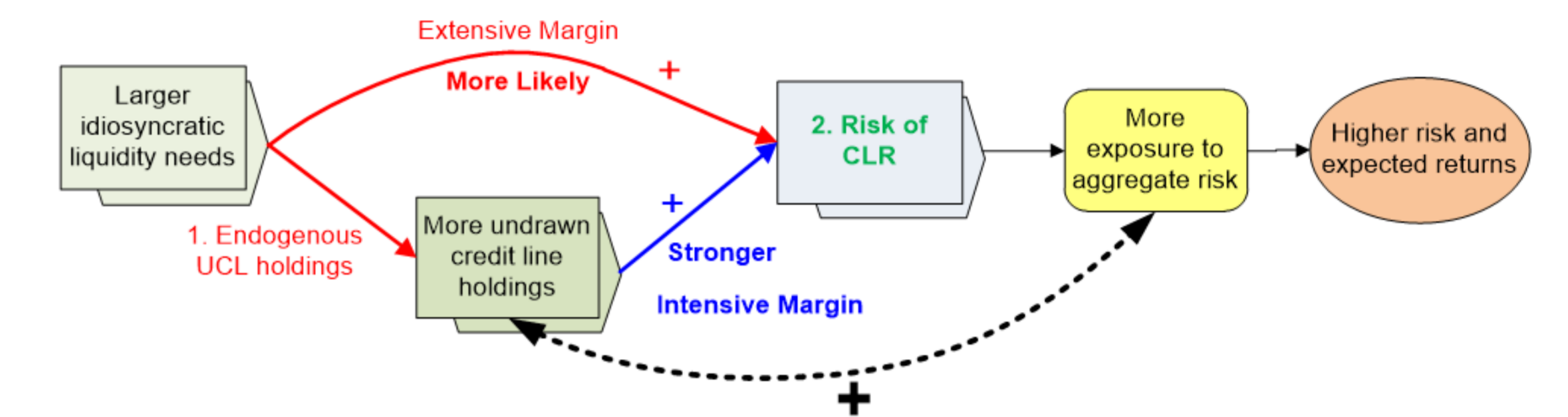
### Fama-MacBeth Regressions

	Dependent Variable: Monthly Excess Returns						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
UCLAT	9.947*** (3.15)	8.911*** (3.11)	9.402*** (3.13)	10.122** (3.92)	10.391*** (3.04)	7.111** (3.07)	9.362*** (2.98)
Book Lev.		-4.786 (4.68)					
Cash/AT			-3.205 (2.89)				
SA Index				-3.384*** (0.95)			
Tangibility					-3.191 (4.56)		
Gross Profit						9.447*** (2.45)	
AT Growth							-3.445** (1.69)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	0.052	0.055	0.055	0.061	0.058	0.055	0.055
Observations	280,438	280,438	280,414	257,191	280,093	280,438	274,426

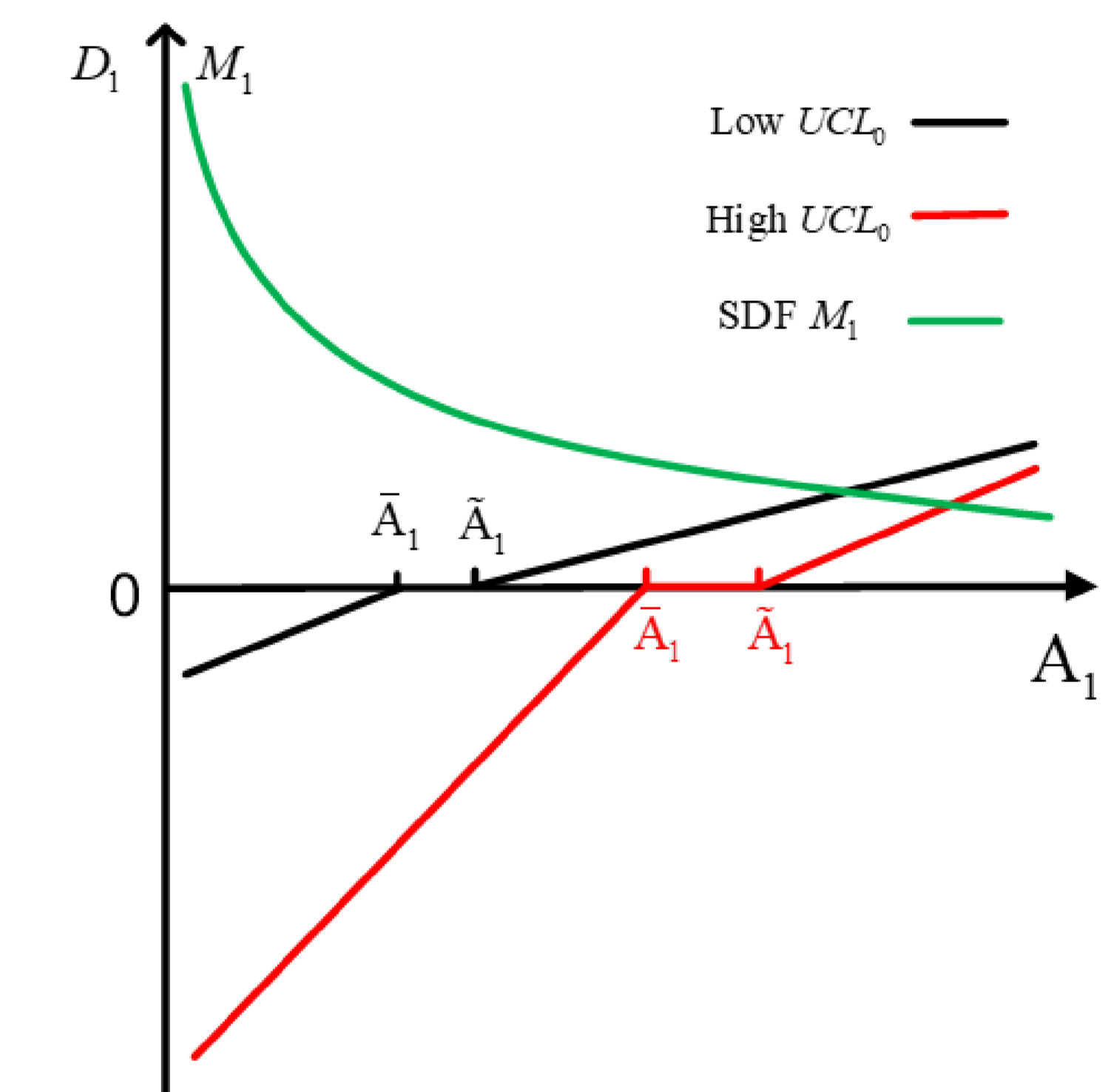
- Control = Size, B/M ratio, Reversal, and Momentum

## Theory: Overview

- Theory within the investment-based asset pricing framework
  - a parsimonious model with credit lines to illustrate the mechanism
    - Extensive margin: firms with larger idiosyncratic liquidity needs are more likely to be affected by CLR
    - Intensive margin: holding more UCL makes firms subject to stronger effects of CLR



- Visualize the two margins of the mechanism:



- Extensive Margin: more likely  $\Leftrightarrow \bar{A}_1 > \bar{A}_1$
- Intensive Margin: stronger  $\Leftrightarrow slope > slope$

## Conclusions

- Positive relation between UCL and firm risk and expected returns
  - significant positive UCL premium (3.88 – 5.74% p.a.)
- a novel risk-based explanation based on
  - endogenous UCL holdings
  - The risk of credit line revocations

- I illustrate the mechanism in an investment-based asset pricing model with credit lines

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