

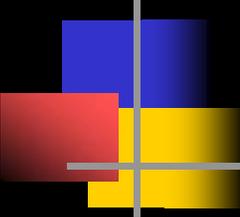
Loans on sale: Credit market seasonality, lender rent seeking, and borrower need

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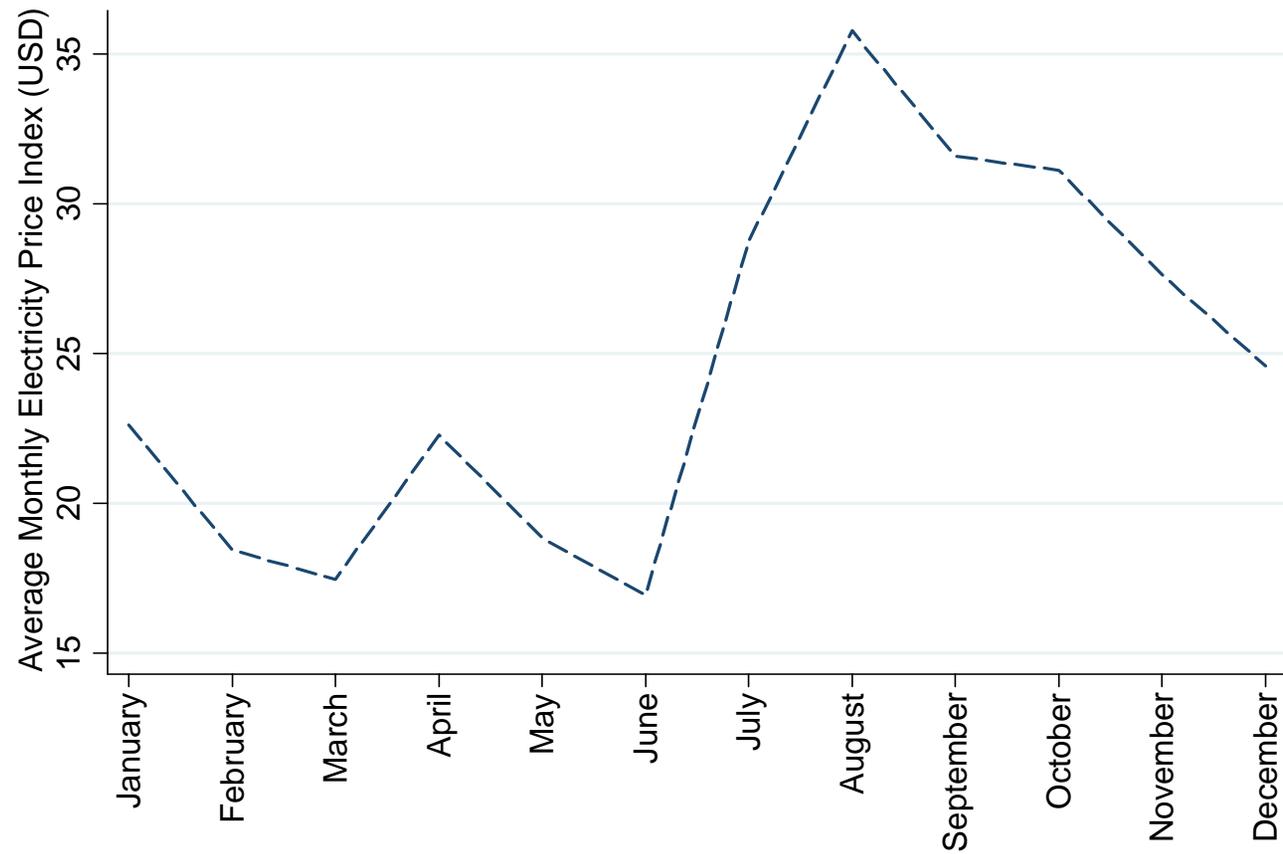
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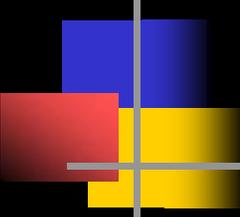


Basic Idea of Paper

- Loan markets are seasonal
 - "Sales" of 15-20 bps in fall & late spring
 - Cheap periods attracts peak volumes
- Our goal
 - Document seasonal cycles
 - Characterize equilibrium demand and supply behavior

Commodities: Electricity

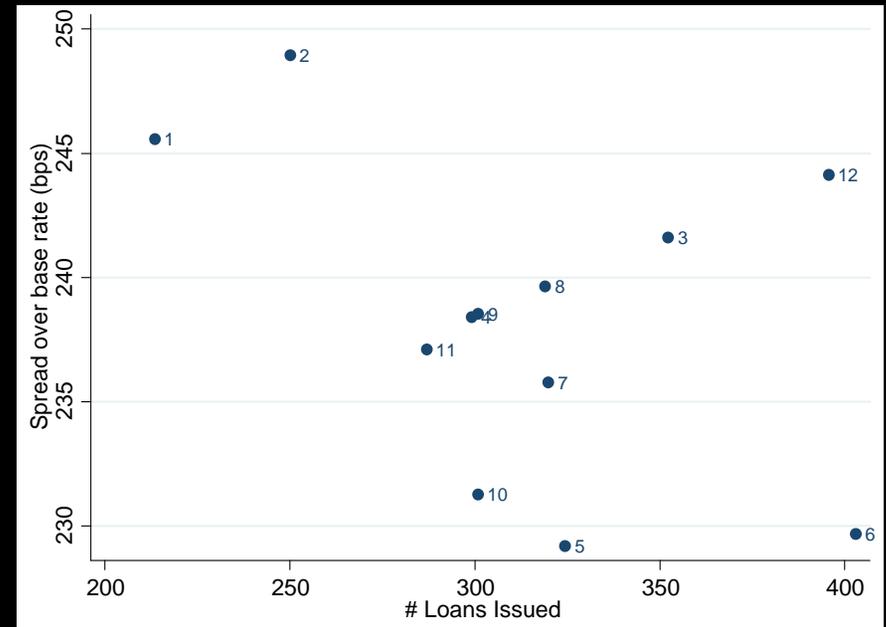
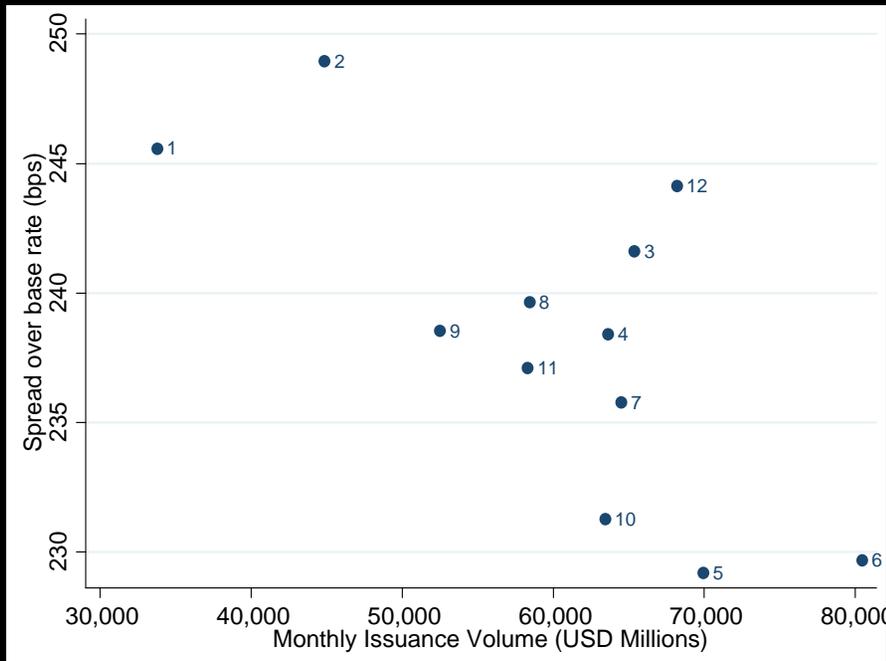




Data Description

- DealScan data on syndicated loans to large corporate borrowers
- All-in-spread is the spread over a base rate paid on drawdowns, plus any annual recurring fees (Average = 225 bps)
- Does not capture one-time upfront fees, commitment fees, waiver fees, etc.
- Can show same seasonal patterns apply to upfront fees and commitment fees

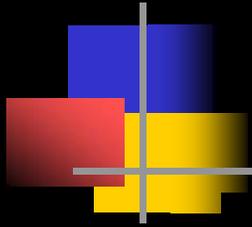
Basic Facts: Seasonality of Spreads & Volumes



Demand Explanations: Seasonal Variation in Spreads (Table 2A)

Loan Spread (bps)	(1)	(2)	(3)	(4)	(5)
Peak Issuance	-1.88 (3.09)	-1.24 (2.69)	-3.87 ¹⁰ (2.23)		
Off-Peak Issuance	13.78 ¹ (4.49)	11.46 ¹ (3.77)	5.01 ¹⁰ (2.97)		
Seasonal Effect				1.09 ¹ (0.30)	0.49 ¹ (0.22)
Secured		124.47 ¹ (3.46)	35.06 ¹ (3.60)		35.04 ¹ (3.60)
Oper Profit/Assets			-160.66 ¹ (19.41)		-160.56 ¹ (19.42)
Total Debt/Assets			39.18 ¹ (6.07)		38.93 ¹ (6.06)
R2	0.23	0.39	0.60	0.23	0.60
Off-Peak – Peak	15.66 ¹ (4.82)	12.70 ¹ (3.98)	8.88 ¹ (3.01)		

Urgent Capital Need Leads to Borrowing When Expensive (Table 4-B)



	<u>CF from Financing</u> Issue Size		<u>Investment</u> Issue Size	
CF from Fin/Issue Size	(5)	(6)	(7)	(8)
Peak Issuance	-0.02 ¹⁰ (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Off-Peak Issuance	0.04 ¹ (0.01)	0.04 ¹ (0.01)	0.03 ⁵ (0.01)	0.03 ⁵ (0.01)
Peak x High Rate Borrower	0.04 ¹⁰ (0.02)	0.03 (0.01)	0.02 (0.02)	0.01 (0.02)
Off-Peak x High Rate Borrower	-0.03 (0.02)	-0.04 (0.03)	-0.04 ⁵ (0.02)	-0.05 ¹ (0.02)
Borrower fixed effects		Yes		Yes
R2	0.11	0.43	0.11	0.34
Off-Peak – Peak	0.06 ¹	0.05 ⁵	0.04 ⁵	0.04 ⁵
(Off-Peak – Peak) x High Rate Borrower	-0.07 ¹	-0.07 ⁵	-0.06 ⁵	-0.06 ⁵

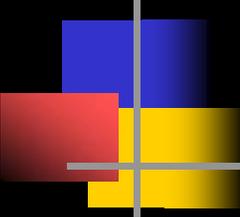
Use of Proceeds & Loan Type Predictable and Deferrable

■ Use of Loans [Table 5-A]

	CP Backup	Working Capital	Debt Repay	Takeover
Peak Issuance	5.88	14.14	18.62	8.46
Off-Peak Issuance	3.80	14.76	17.62	11.01
Rest of Year	4.55	14.74	19.37	9.07
Total	4.77	14.57	18.80	9.30
X ² test of independence	66.6 ¹	2.9	13.7 ¹	49.7 ¹

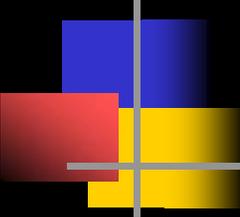
■ Type of Loan [Table 5-B]

- Revolvers (Peak)
- Term loans and bridge loans (Off-peak)



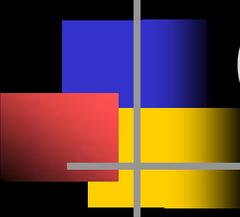
Review of Results Thus Far

- Seasonality in Quantity & Price
- Shifts in Demand Don't Eliminate
 - Only highly rated firms shift demand
 - High value/Non-deferrable projects lead firms to borrow even when expensive
- Supply Response or Non-Response



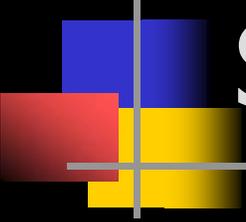
Price Discrimination by Banks

- Buyers Differ in Willingness To Pay (WTP)
- Perfectly Competition: No Δ in Margins
- Monopolist Can Price Discriminate
 - Seasonal Pricing: Conlisk, Gerstner, & Sobel ('84)
 - High price period
 - Low price (sale) period



Oligopolistic Market

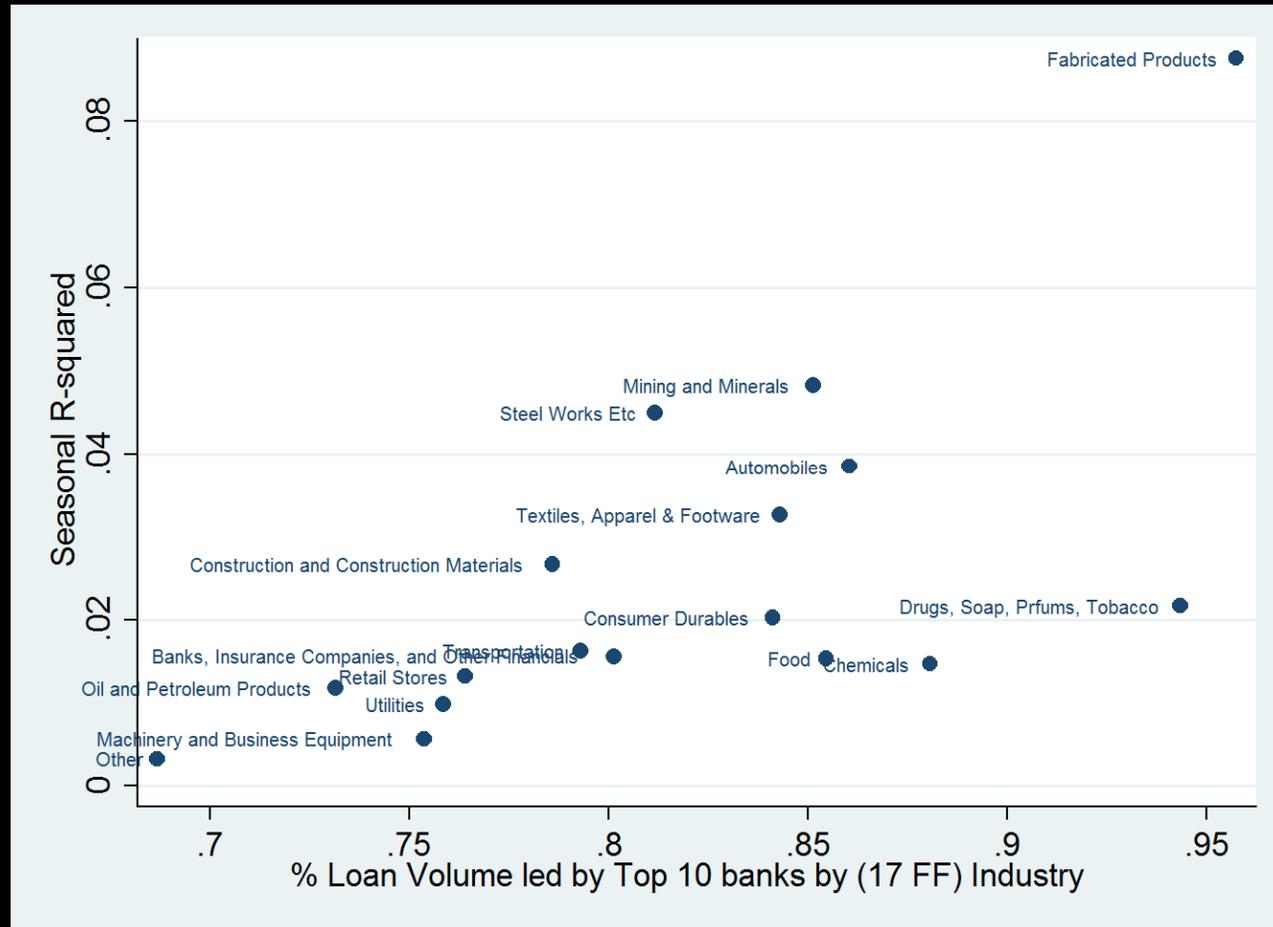
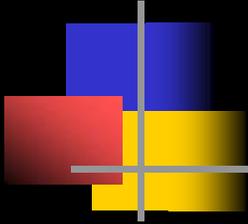
- Requirements to Maintain Seasonality
 - Market concentration
 - Ability to punish deviating lenders
- Not A Monopolistic Market
 - 10 Large players
 - Competitive fringe
- Punishment is Feasible
 - Repeated & visible interaction

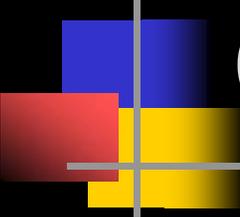


Supply Response

- Time Series Variation: By Year
 - Top 10 arranger: 59% to 81% (Fig 4)
 - Correlation with Seasonal: 49%
 - Seasonal Sensitivity: ↑ in Concentration (T6)
- Competitive Fringe (Fig 5):
 - Lead deals in expensive times: 28 vs 20%
- Competition Across Industries

Seasonality and Lending Market Concentration





Conclusions and Thoughts

- Seasonality in Lending Market
 - Prices are high in off-peak season
 - Credit risk variation explains only a portion
- Constraints on Shifting Demand
 - Impatient Borrowers with Project
 - Unexpected, high-value, non-deferrable
 - High cost of storage
- Constraints on Shifting Supply
 - Profitable for the dominant players