Global Share Repurchases Over the Business Cycle

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Abstract

Using a dataset that covers details of repurchase cases across the globe, we comprehensively analyze how repurchase motives, details, and consequences vary over the business cycle. We find that in economic recession, firms buy back stocks to bring up undervalued stock price or to enhance market liquidity, and their repurchase announcements are accompanied by higher short-term stock returns and a lower completion rate. In expansion periods, firms repurchase to distribute excess cash; their announcements are followed by less inefficient investment, higher long-term returns and a higher completion rate.

Motivation

- Repurchase literature has been mostly studying two important questions:
  - Why firms repurchase?
  - What is the consequence of repurchase?
    - Flexibility hypothesis; Signaling hypothesis; Undervaluation hypothesis; Liquidity hypothesis
    - Plenty of U.S. studies, few international studies

- Business cycle: a fundamental factor
  - Affects almost every firm in every country
  - How firm behaviors vary over the business cycle?
    - Leverage dynamics over the business cycle (Halling, Yu and Zechner, 2016)
    - Corporate investment over the business cycle (Dangl and Wu, 2016)
    - Firm financing over the business cycle (Begenau and Salomao, 2019)

- Repurchase motivations in expansion and in recession may differ
  - Expansion: distribute cash, maintain flexibility
    - Firms tend to have better performance and more cash inflows, which further lead to more distributions
    - Because of dividend stickiness, firms repurchase to avoid long-term commitments
  - Recession: stabilize stock price
    - Firms may have a lower potential to make distributions, but it's important to stabilize stock price in recession.
    - Firm may have an incentive to use repurchase as a method to increase liquidity.

- Question: how repurchase motivations, details, and consequences vary over the business cycle?
  - Link between macroeconomic conditions and firms' decisions

Data

- Repurchase Case-level data
  - Case-level detailed repurchase information over the globe: S&P Global Market Intelligence (1989-2020)
    - Detailed repurchase information: repurchase type, announcement date, announced repurchase percentage relative to total shares or total stock value, and completion rate of announced size.

- Financial data:
  - Annual-level: Worldscope (1980-2020)
  - Daily-level: Compustat Global (1980-2020)

- Business Cycle Data
  - ECRI (covers 21 countries or economies)
    - On average 5.8 expansion periods and 6.6 recession periods in an economy
    - On average one expansion period lasts for 6.5 years
    - On average one recession period lasts for 16 months
  - OECD GDP measure (robustness check)

- Market Coverage: 21
  - 92,476 firm-year observations, 6,385 repurchase cases.

Findings

- Pro-cyclical actual repurchase, counter-cyclical repurchase announcement
  - In expansion, firms repurchase more shares to:
    - distribute cash and maintain flexibility
  - In recession, firms have more repurchase announcements to:
    - enhance market liquidity and stabilize stock price
  - Details of repurchase cases:
    - In recession, percentage sought in repurchase ↓
    - In recession, completion rate ↓
    - In recession, duration of repurchase case ↑
  - Liquidity
    - In recession, stock liquidity after the announcement ↑
  - Market reaction:
    - In recession, short-term announcement return ↑

- Firms repurchase stock for different purposes under different economic conditions.

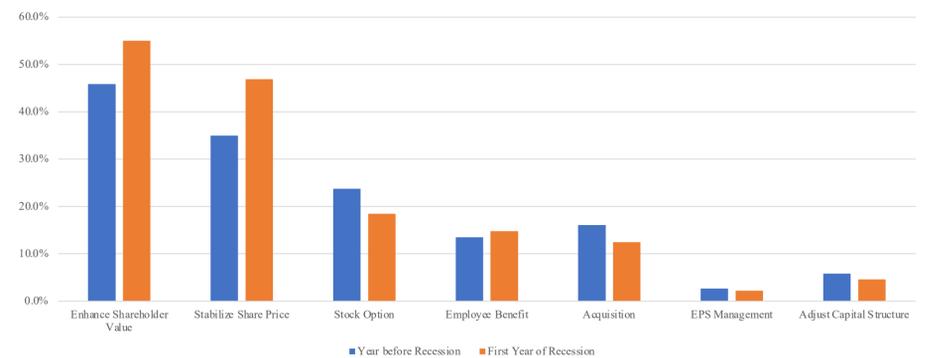## Empirical Results

Figure 1. Purposes of Repurchase

Table 1. Payout over the Business Cycle

	Actual Repurchase Amount	Dividend Payment Amount	Dividend Proportion
Recession	-0.224***	-0.284*	2.997**
	(0.00)	(0.09)	(0.01)
Controls	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes
Industry-Year Dummy	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes
Observations	57,658	84,064	55,216
R-squared	0.581	0.794	0.791

Table 2. Repurchase Announcement over the Business Cycle

	# of Repurchase Announcements	# of Market Repurchases	# of Tender Offers
Recession	0.0732*	0.0748*	-0.00156*
	(0.09)	(0.09)	(0.06)
Controls	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes
Industry-Year Dummy	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes
Observations	92,476	92,476	92,476
R-squared	0.438	0.440	0.287

Table 3. Repurchase Details over the Business Cycle

	Completion Rate	Duration Days	Planned Percentage Sought in Repurchase Announcements
Recession	-6.204***	63.89***	-0.614*
	(0.00)	(0.01)	(0.07)
Controls	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes
Industry-Time Dummy	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes
Observations	5,675	6,385	4,692
R-squared	0.905	0.972	0.944

Table 4. Repurchase Consequences - Announcement Return

	CAR (-2, +2)	CAR (-5, +5)	Abnormal Stock Return (3 months)	Abnormal Stock Return (6 months)
Recession	0.00993*	0.0168*	-0.0353*	-0.0481**
	(0.06)	(0.08)	(0.07)	(0.02)
Controls	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Industry-Time Dummy	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes
Observations	5,685	5,663	4,771	3,835
R-squared	0.734	0.731	0.794	0.838

- Purposes are identified based on the transaction comments from S&P GMI
- Control variables include *Total Assets, Leverage, ROA, Market-to-Book Ratio, Tangibility, Liquidity, Sales Growth,* and *Market Share.*

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