ILLINOIS
Gies College of Business

The Finance of Mergers and Acquisitions

Heitor Almeida

Creating shareholder value

New products

Buying other companies that have valuable projects

Mergers and Acquisitions (M&A)

Or selling the company to another owner

The Business of M&A

Theory and practice of M&A use knowledge from several fields of business

- Strategy
- Management
- Law
- Accounting

The Finance of M&A

My course focuses on Finance

- Valuation
- Financing
- Pricing
- Deal design

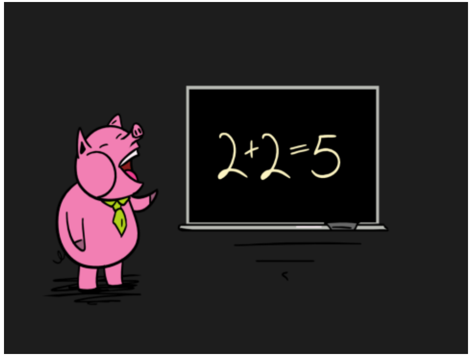
Topics for today

Why do M&A deals happen?

Does M&A create value?

The Concept of Synergy (1 of 2)

Key idea: merger adds value only if the two merging companies are worth more together than apart ("synergies")



The Concept of Synergy (2 of 2)

Synergy = 5 – (2 + 2) = 1

The synergy is the value added by the merger

When is 2 + 2 = 5? Rational Motives for Mergers (1 of 2)

a. Economies of scale

Reduce costs, increase profits

b. Industry consolidation and market power

Mergers between competitors in the same industry

Charge higher prices!

When is 2 + 2 = 5? Rational Motives for Mergers (2 of 2)

c. Economies of vertical integration

- Buying a major supplier and producing “in house”

d. Eliminating inefficiencies (such as poor management)

Other Motivations

Besides synergies are there other valid motivations for M&A deals?

Yes

- Liquidity-driven deals
- Valuation-driven deals

Liquidity-Driven Deals

Most common during crisis such as 2008-2009, Covid-19, etc.

Provide cash to either acquirer or (more often) target

Alleviate financial distress

Valuation-Driven Deals

Finding an undervalued target can create value even with zero synergies

If a firm's stock price is $10 but should be $15, then buying stock is a good deal

Buying the whole company is even better!

Sometimes It Goes Wrong…

Finding truly undervalued target is hard

Warren Buffett: I Overpaid for Kraft Heinz

Berkshire Hathaway doesn't plan to change its ownership stake in Kraft Heinz despite the struggles, he says

Berkshire Hathaway Chairman and CEO Warren Buffett said he wouldn't buy more Kraft Heinz, even after its share prices slumped last week, because 'it isn't worth as much.'

https://www.wsj.com/articles/warren-buffett-i-overpaid-for-kraft-heinz-11551098035

Typical Premia in M&A Deals

Typical premia paid for targets is on average close to 30%

So if target price is $10, offer is on average $13

That means that M&A should increase value by at least 30% of the target's equity value

Value Creation According to Management (1 of 2)

When an M&A deal is announced, management will often announce the expected increase in future cash flows (synergy cash flow)

Value Creation According to Management (2 of 2)

We can use these cash flows to come up with the net present value (NPV) of synergies

Typically NPV synergies > premium

CAT – Bucyrus Deal in 2010

https://de.wikipedia.org/wiki/Bagger

CAT – Bucyrus Synergies

Caterpillar estimated more than $400 million in annual synergies beginning in 2015 derived from the combined financial strength and complementary product offerings of the combined mining equipment businesses.

CAT – Bucyrus Synergies

NPV of these synergies estimated at around 3B dollars, as of the end of 2010

Premium paid for Bucyrus = 1.8B

So CAT is supposedly making 1.2B with deal

NPV for acquirer = Synergy - Premium

Is the Management Right?

Maybe…

We can also look at stock prices

If deal is NPV > 0…

Stock prices should increase

Do they?

Which Stock Price?

Using market efficiency theory, we can look at how the market reacted to the announcement of the deal

How did the stock prices of acquirer and target change on the date that the market learned about the deal?

Immediate effect on stock prices

CAT - Bucyrus

Closing value on 11/12/2010

- CAT: 51.4B
- Bucyrus: 5.6B

Opening value on 11/15/2010

- CAT: 50.7B
- Bucyrus: 7.3B

(CAT + Bucyrus) up by 1B

Management or Market?

According to management

- NPV of synergy = 3B
- NPV for CAT = 1.2B

According to the market

- NPV of synergy = 1B
- NPV for CAT = **minus** 0.8B

Is This a Typical Situation?

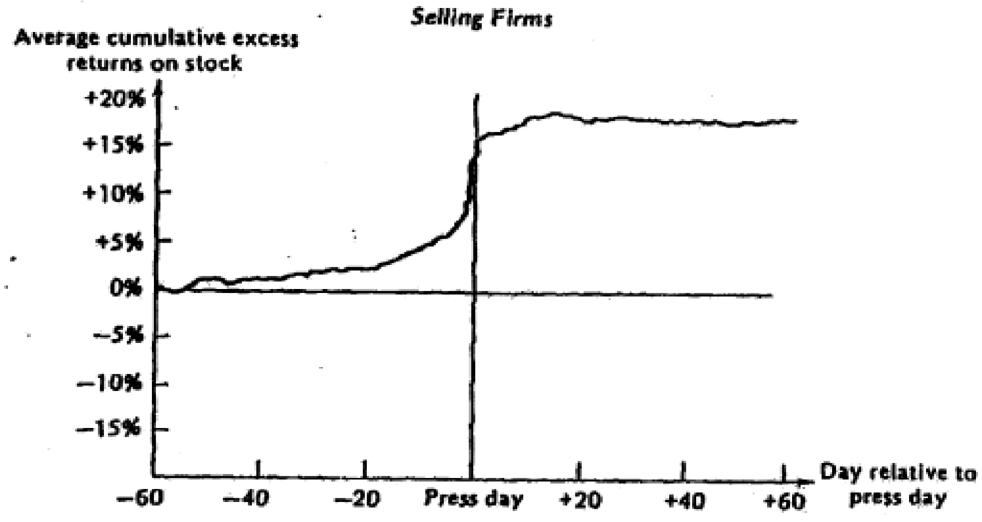
It turns out that it is

Academic evidence suggests that acquirer stock prices typically do not increase when an M&A deal is announced

Management begs to disagree!

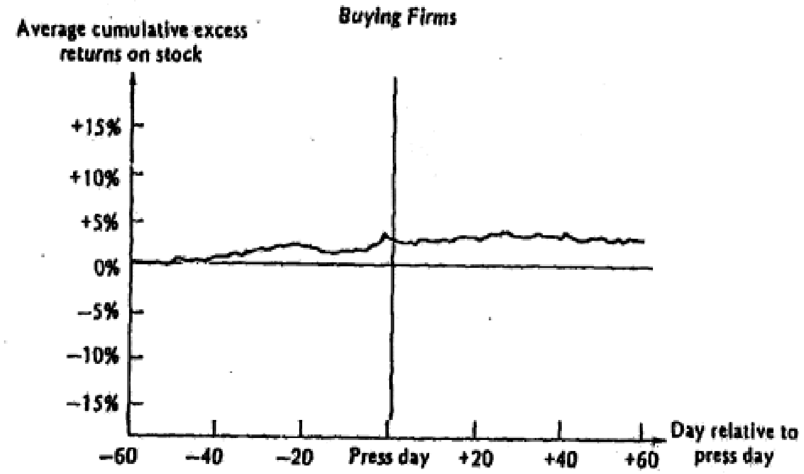
Evidence for Target Firms

Deals are positive NPV for targets – they earn a significant premium on



(Asquith, 1983)

Evidence for Acquirer Firms



Mergers do create value, but most or all of the gains go to target firms.

Acquirers pay too much!

(Asquith, 1983)

Some Deals Do Better Than Others (1 of 3)

If we divide deals for public targets into cash and stock deals we find that

Cash deals generate 0.7% increase in acquirer’s stock price, on average

Stock deals generate -2.3% **decrease** in stock price, on average

Some Deals Do Better Than Others (2 of 3)

Acquiring **private** targets generates higher returns for the acquirer than acquiring **public** targets

Some Deals Do Better Than Others (3 of 3)

Returns to private acquisitions range from 1% to 3% for acquirer on average depending on means of payment

Returns from public acquisitions range from 0% to -3%

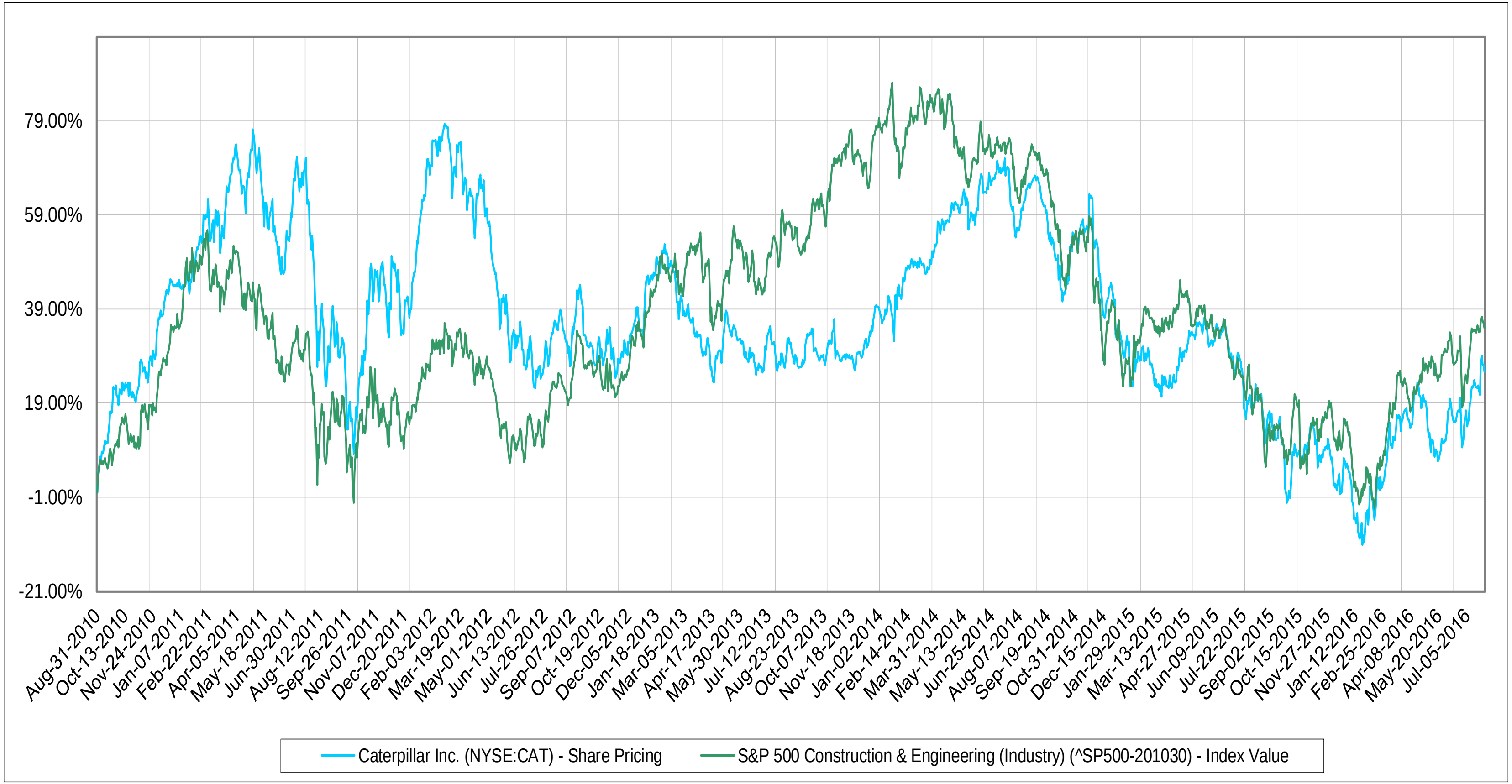
What About the Long-Term?

Can’t we look at long-term stock prices to decide who was right about the merger (management or market)?

It turns out that interpreting long-term returns can be very difficult

- Many confounding factors

CAT – Long Term Reaction



What Can We Learn?

CAT overperforms the S&P construction & engineering index in the first two years after the merger

Is it **because** of the merger?

CAT underperforms the index in 2013 and part of 2014

Is it **because** of the merger?

So, does M&A create value or not?

The truth is that we don’t know

As I like to say,

(Corporate) Finance is not Physics…

I think that makes it more interesting!