

# Mergers

Emphasis on horizontal mergers

# Importance of mergers

## Notable recent deals

Top 10 M&A deals worldwide by value from 2011 to 2020 (correct as of 31 December 2015):

Rank	Year	Purchaser	Purchased	Transaction value (in billions USD)	Inflation adjusted (in billions 2016 USD)
1	2013	Verizon Communications [13] [N 1]	Verizon Wireless	130	134
2	2015	Dow Chemical <sup>[14]</sup> [N 2]	DuPont	130	131
3	2015	Anheuser-Busch InBev [N 3]	SAB Miller	117.4	119
4	2016	AT&T Inc.	Time Warner	108.7	109
5	2015	Heinz <sup>[15]</sup> [N 4]	Kraft	100	101
6	2015	Charter Communications <sup>[16]</sup> [N 5]	Time Warner Cable	78.7	80
7	2015	■ Actavis	Allergan, Inc	70.5	71
8	2015	Royal Dutch Shell <sup>[17]</sup>	<b>BG</b> Group	70	71
9	2015	Dell [N 6]	EMC Corporation	67	68
10	2016	Bayer	Monsanto	66	66

Source: Wikipedia

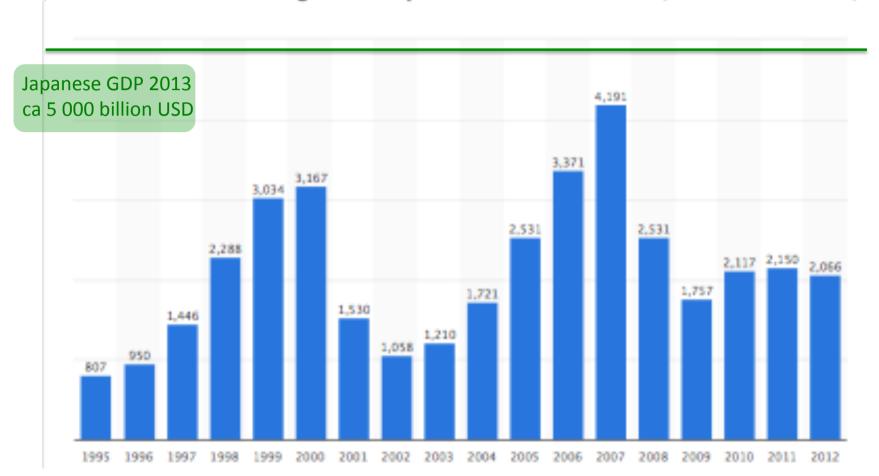
## Industries are reshaped

- Big Pharma in troubles
  - Patents expire
  - Low R&D productivity
- M&A pattern 1998-2012 (top 20 companies)
  - 991 transactions between 1998 and 2012 (Source: CEPTON Strategies)

	Pfizer	Novartis	Sanofi	Merck & Co	GSK	Roche	AstraZeneca
2012*	NexWave Pharma	Fougera				Sapomp Wohnbau	Ardea Biosciences
2011	Capsugel	Genoptix Alcon	Genzyme	Inspire Pharma	Human Genome Sciences GSK OTC		Astra Tech
2010	King Pharma FoldRx	Corthera	Chattem  TargeGen	SmartCells			Novexel
2009	Wyeth	EBEWE Elixir Pharm Proteon	Merial Medley BiParSc.	Schering- Plough	Stiefel Laboratories	Genentech	
2008		Speedel	Acambis Symbion Consumer		Sirtris	Chugai Ventana	
2007	BioRexis Pharma	Néstle Medic Nutrition Gerber Prod	al		Reliant	BioVeris	Med-Immune
2006	Pfizer Consum Healthcare	er NeuTec Chiron	Delta Biotech Zentiva	Sirna Therapeutics GlycoFi	AllenSpa Generic BU CNS		Cambridge (Antibody Tech
2005	Angiosyn	Eon Labs Hexal		Medco Health Solutions	ID Biomedical	OTC Drugs U	nit
2004	Esperion	Sabex Durascan	Aventis	Aton Pharma	Fraxiparine + Arixtra Sanofi	Igen Internati	onal Durascan
2003	Pharmacia	O Idenix Pharm	na	Banyu		Disetronic	
2002		◯ Lek		Generic BU		Nippon Roch Vitamins Unit	
2001		Agribusiness		Rosetta Inpharmatics	Block Drug		Cellmark Diagnostics (
2000	Warner-Lambe	rt Wesley Jess	en		Glaxo Wellcome SmithKline		
4000			Sanofi +				A7

# Aggregate activity

Volume of worldwide mergers and acquisitions from 1995 to 2012 (in billion U.S. dollars)



http://www.statista.com/statistics/267369/volume-of-mergers-and-acquisitions-worldwide/

## Conclusion

- Merger activity
  - Individual deals are substantial
  - Entire industries are reshaped
  - Aggregate volume is huge
- In sum
  - Mergers reshape/adapt economy

# Motives for mergers

## Motive 1: Efficiencies

- Horizontal coordination
  - Economies of scale and scope
  - Rationalization
- Vertical coordination
  - Avoid holdup of investments
- Take over of underutilized assets

## Motive 1: Efficiencies

- An efficiency externality
  - Market for corporate control
  - Take over of underutilized assets
  - Threat of takeover important disciplining force on managements

## Motive 2: Market power

- Horizontal effects
  - Definition: Between competitors
  - Problem: Unilateral or coordinated
- Vertical effects
  - Definition: Between buyer and seller
  - Problem: Foreclosure

## Other motives for mergers

- Management driven
  - Management prestige (empire building)
  - Hubris
- Industrial policy
  - "National champions" prestige
  - Employment

## Basic Elements of Mergers Policy

Richard Whish & David Bailey: Competition Law, Seventh Edition, Oxford University Press, 2012.

#### Goals

- Consumer welfare
  - Anticompetitive effects
  - Cost efficiency, but only if beneficial to consumers
- Disregard
  - Employment

## Meaning of "merger"

- Definition of "concentration"
  - Previously independent businesses come under common control

#### Examples

- Acquisition of minority shareholding may be sufficient, if it gives "decisive influence"
- Acquisition of assets (ex: plants, brands, patents)
- Merger of parts of businesses into joint venture

#### Notification

- Mergers with Community dimension prenotified to Commission
  - Combined worldwide turnover > €5000 mn
  - EU-wide turnover > €250 mn of each company
- Other big mergers pre-notified to Member State

## Notification

- Extra-territorial
  - Does not matter if all companies are e.g. American
- One-stop-shop
  - Mergers with Community dimension cannot be tried by Member States
  - Still, many big mergers have to be notified to 10 –
     20 different competition authorities

## Notification

- Notification contains information on e.g.
  - Affected markets
  - Parties market shares
  - HHI

## **Decision rights**

#### • EU

- Commission decides
- Firms can appeal to courts

#### • Sweden

- KKV = "prosecutor"
- Courts decide

## Time limits

- Phase I
  - 25 working days
- Phase II (3 % of cases)
  - 90 working days

## Competition test

- Now: "Significant impediment of competition"
  - Typically: creates or strengthens dominant position (= high level of market power)
  - Includes:
    - Single firm dominance = "similar to monopoly"
    - Joint dominance = "similar to cartel"
    - But also regular oligopoly
- Previously: Dominance
  - Unclear if regular oligopoly was included

## Competition test

- Define markets
  - Product market/geographical markets
- Estimate effect on competition
  - Much emphasis on market shares and concentration
  - Diversion ratios
  - Strength of brand

## Competition test

- Presumption: No problem if
  - Parties market share < 25%</p>
  - Post-merger HHI < 1000</p>
  - Post-merger HHI < 2000 & ΔHHI < 250</p>
  - $-\Delta HHI < 150$
- Recall
  - HHI max = 10 000 (= 100<sup>2</sup>)
  - $-1000 = \text{ten symmetric firms } (= 10 \times 10^2)$

## **Entry and Buyer Power**

#### Entry

- Likely = assessment of entry barriers
- Timely = normally within 2 years
- Sufficient = eliminate price increase

#### Buyer power

- Size of buyer
- Ability to integrate
- Sponsor upstream entry

## Efficiencies

- Benefit consumers
  - Lower prices
    - Large reductions in marginal cost
    - Incentive to pass on
  - New or improved products
- Merger specific
  - Cannot be achieved without reduction in competition
- Verifiability
  - Firms must be able to ensure Commission

## Failing firm defense

- No impediment to competition if
  - One firm would become bankrupt
  - Assets would exit the market
  - No less anti-competitive alternative to the merger

## Remedies

- Usual solution solution if problems
- Types of remedies
  - Divestiture of overlapping businesses
  - Access to an essential facility
  - Licensing of technology

#### Evidence

- Burden of proof
  - Commission has burden to prove
    - Anti-competitive effects
    - No buyer power
    - No entry
  - Firms have burden to prove
    - Efficiencies
    - Failing firm defense

#### Evidence

- Different standards of proof
  - "On the balance of probabilities" or
  - "Beyond reasonable doubt"
- Merger policy
  - Convincing evidence (= balance of probabilities, if I understand it right)

#### **Statistics**

1990 - 2017

- Notifications: 6522
- OK
  - Phase I: 5803
  - Phase II: 62
- Interventions
  - Withdrawn: 177
  - OK with commitments: 121
  - Prohibitions: 26

# Use of economics in merger policy

## Theory of competitive harm

#### Fundamental difficulty

- Assessing notified mergers = predicting the future
- Must build on economic theory
- Competition authorities must present a theory of competitive harm in every case

## Theory of competitive harm

- Theory of competitive harm
  - Unilateral effects
  - Coordinated effects
  - Vertical effects

## Counterfactual

- Effect = Difference between
  - Future market outcome with merger
  - Future market outcome without merger =Counterfactual
- Possible counterfactuals
  - Most often: Status Quo
  - Sometimes: Failing firm
  - Possible: Alternative mergers (Volvo/Scania)

#### Economic evidence

- Competition authority must present evidence in support of its "theory of harm"
- Examples of sophisticated economics
  - Estimation of cross-price elasticities
  - Price correlations
  - Merger simulations

# Economic Analysis of the Welfare Tradeoff (some details)

# Agenda

- Anti-competitive effects of horizontal merger (theory of harm)
  - Unilateral effects
  - Coordinated effects
- Efficiency gains
- Total effect on welfare / consumer surplus

### Unilateral effects

- "Internalization"
  - Merging firms' initial incentive to increase prices
  - To study this incentive assume merger from duopoly to monopoly or that competitors keep their prices fixed
- Outsider response
  - Competitors' reaction to initial price change

### Internalization

### Internalization

- Increased price before merger
  - + Increased markup  $(p_A c_A)$
  - Some customers leave the market
  - Some customers buy product B instead
- Increased price after merger
  - + Increased markup  $(p_A c_A)$
  - Some customers leave the market
  - O Some customers buy product B instead
- More beneficial to increase price

# Outsiders' Response

#### Response

- Insiders increase price and reduce output
- Outsiders' residual demand increase
- Outsiders respond by
  - Increasing price
  - Increasing output

#### Key issue

– Will outsiders mainly increase price or output?

# Outsiders' Response

- Outsiders increase output much if
  - Outsiders' conduct competitive
  - Outsiders' costs low
  - Outsiders have no capacity constraints
  - Easy to switch between geographical markets
  - Entry costs low

### **Efficiencies**

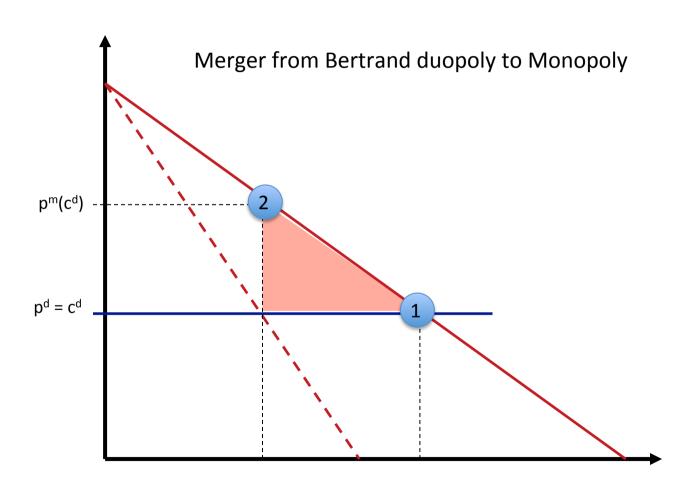
#### Efficiencies

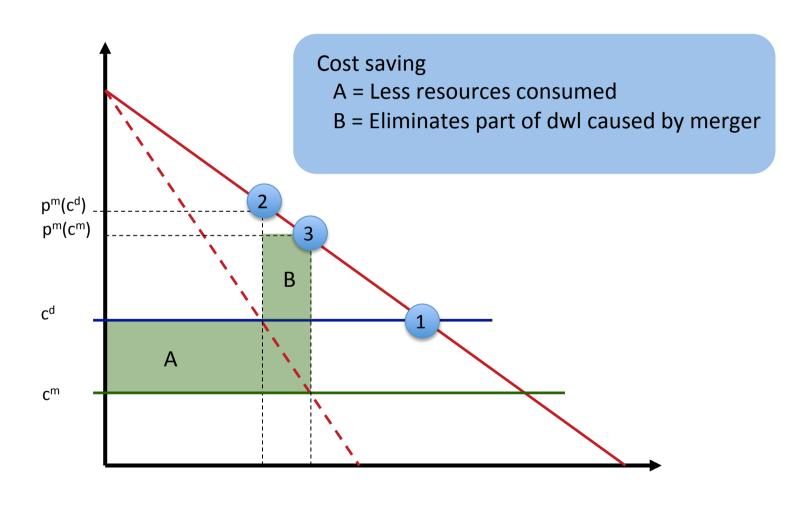
- Rationalization
  - Reallocate production to efficient plants
- Economies of scale
  - Avoid duplication of various activities
  - Coordination of new investments
  - Specialization lengthen production runs
- Technological progress
  - Pooling existing know-how
  - Coordinate R&D
- Reducing slack
  - Replace inefficient management

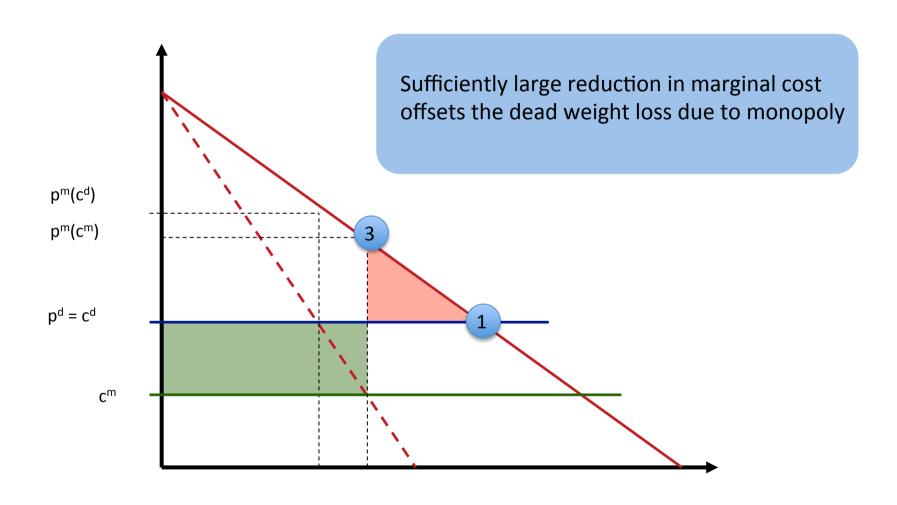
### Efficiencies

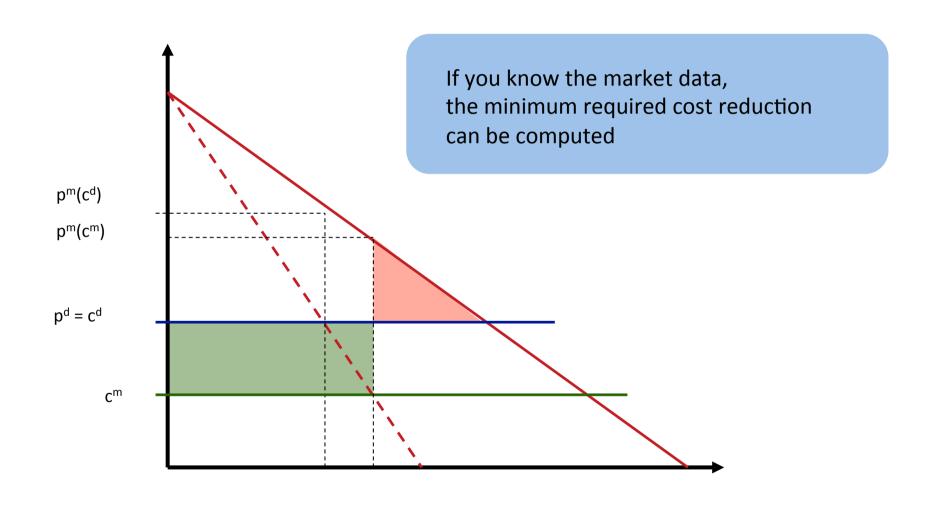
- But mergers may also cause inefficiencies
  - Less competition may lead to more slack
  - Larger organization may be more difficult to control
  - Problems melting cultures together

#### Total welfare and consumer welfare

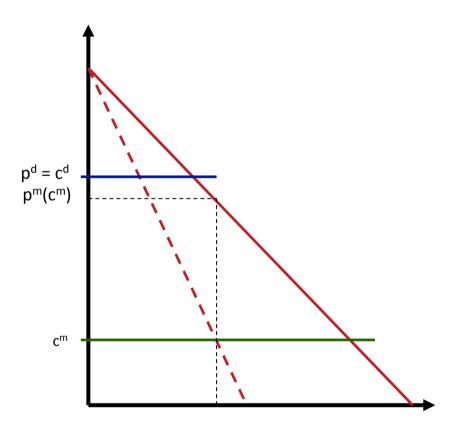








### Consumer welfare



- Price may go down
- ΔMC must be large
- Marginal cost, not fixed
- Can be computed, if we know demand