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REGIONAL OFFICE FOR Europe

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Европейское региональное бюро

Pharmaceutical pricing and reimbursement policies in Europe: Challenges and opportunities

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Pharmaceutical policies

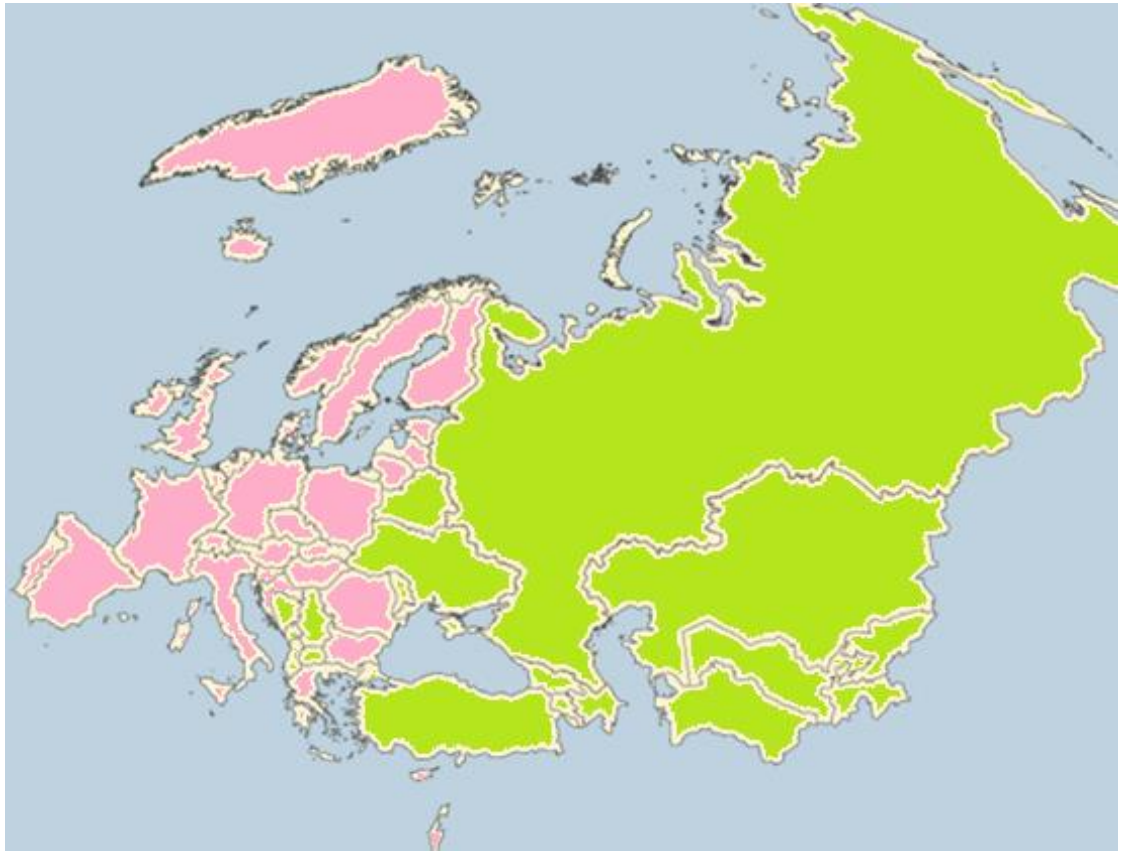
- Very few economic sectors are as intensively regulated as the pharmaceutical one is.
- Crossroad sector:
  - Health issue (access, security, vigilance, etc.)
  - Budgetary issue (public expenditure containment)
  - Industrial issue (innovation, economic attractiveness, etc.)

Pharmaceutical economics

- What is different in the pharmaceutical industry that entices many governments to build controls related to price?
  - Unusual purchase decision model (tripartite product selection process) leading to significant market failure
  - Industry cost structure is different (High R&D costs offset by high margins)
  - Important reliance on patent protection
  - Existence of monopsony payers
  - Moral complexity: “the right to access affordable healthcare”

EURO's member states

EURO's member states



Healthcare systems in Europe

- High share of public health expenditures (on average 2/3)
- Tax based funded vs. social health insurance systems

Model	Countries
National Health Service (NHS)	CY, DK, ES, EL, FI, IE, IT, MT, NO, PT, SE, UK
Social Health Insurance (SHI)	AT, BE, BG, CH, CZ, DE, EE, FR, HR, HU, LT, LU, LV, NL, PL, RO, SI, SK

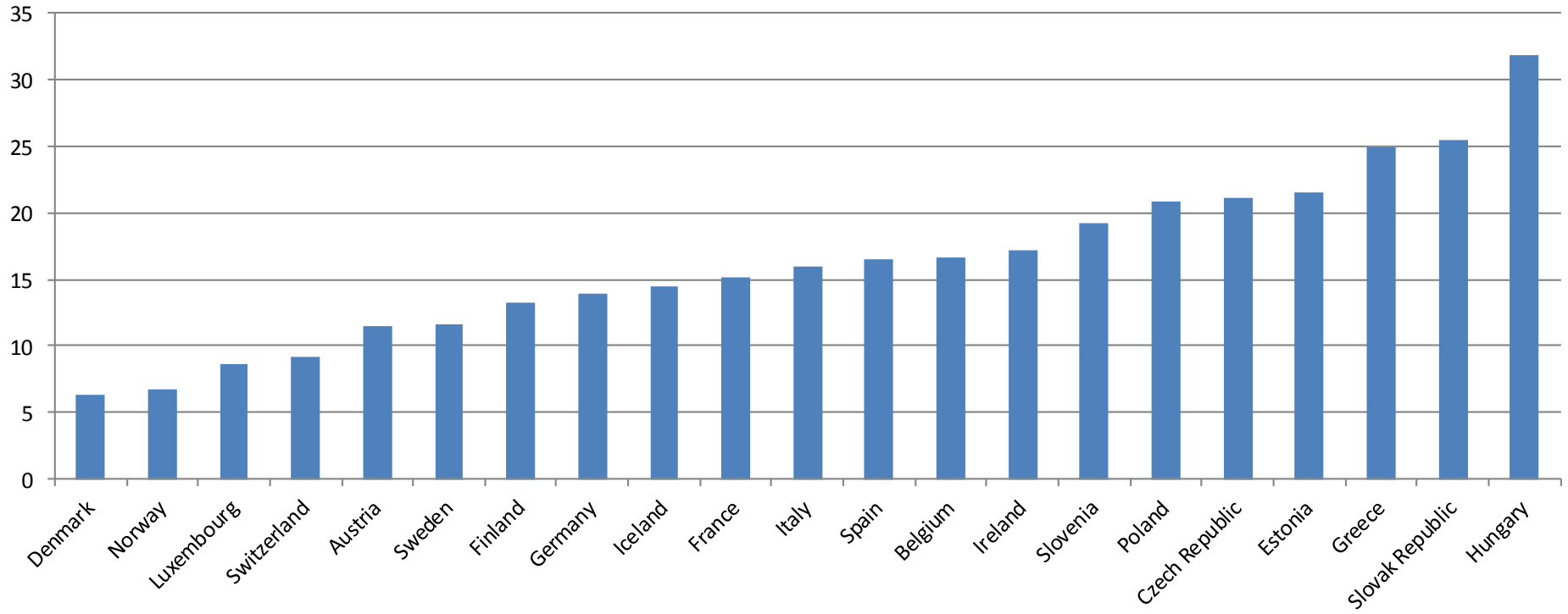
S.Vogler *et al*

Key figures of the pharma industry in Europe

- A major economic sector…
  - Market value: €163b (of which €120b publically funded)
  - 700,000 persons employed
- … and an important burden for European countries budgets
  - Countries spend 1.4% of their GDP on pharmaceuticals
  - Important variation among countries

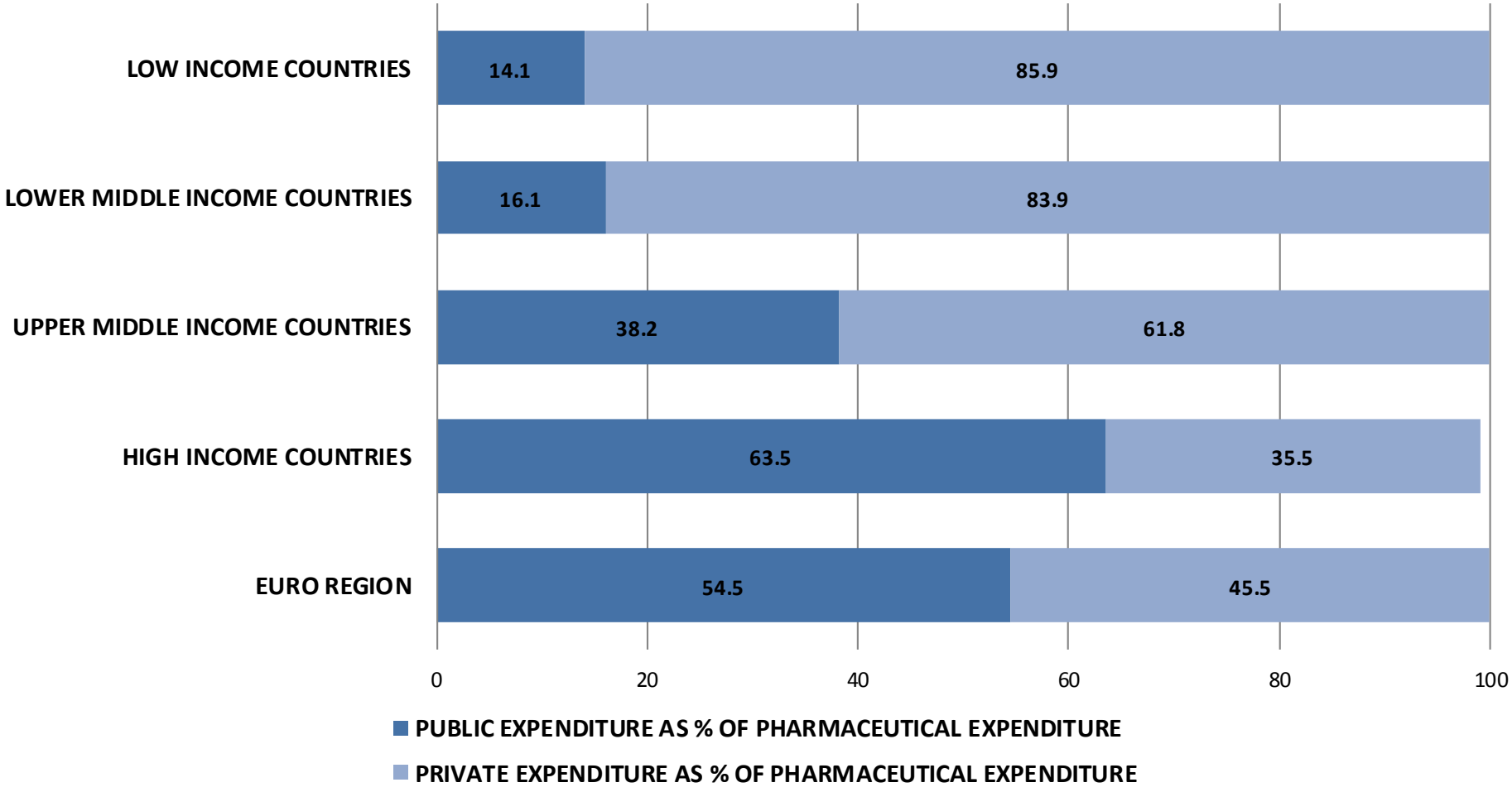
EFPIA 2014, OECD 2016

Pharmaceutical expenditure as % of total health expenditures



OECD 2014

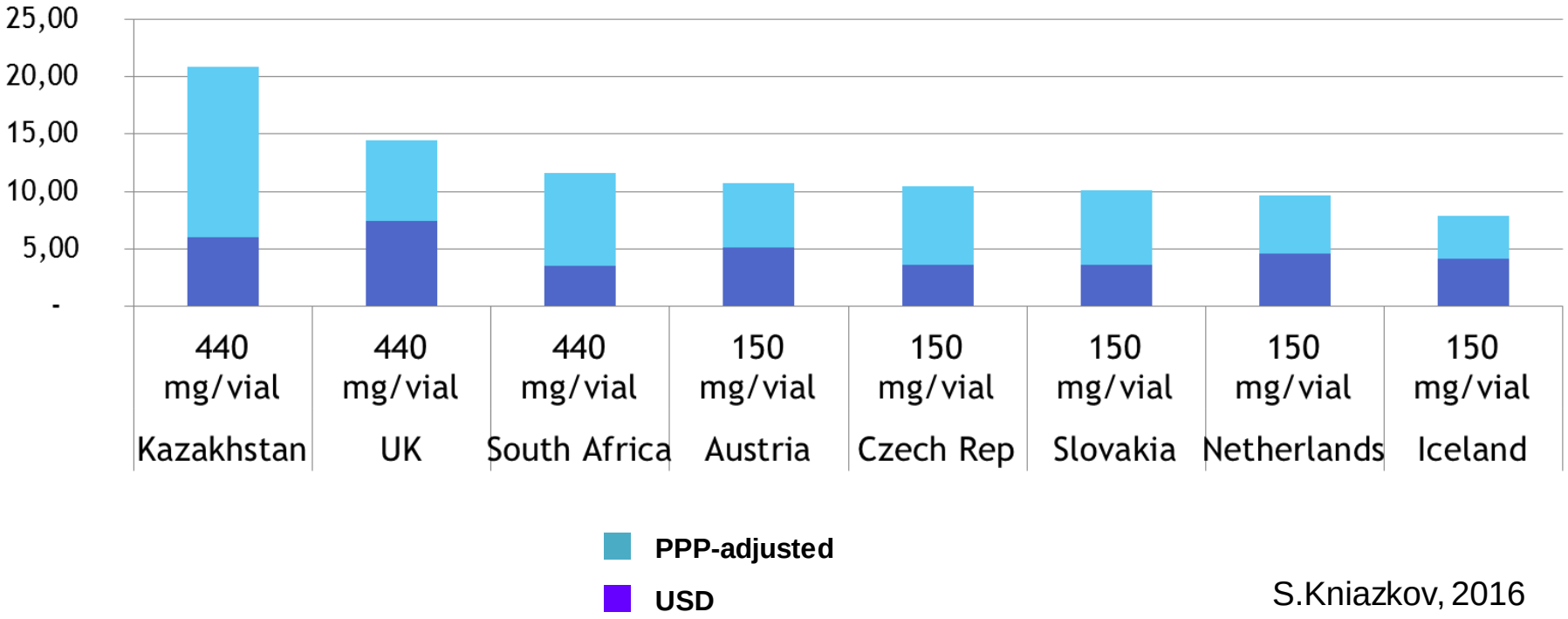
Private health expenditure as a percentage of total pharmaceutical expenditure



Regional Pharmaceutical Situation Report, 2013

Price differences – ex: trastuzumab

150 mg (21 mg/ml) powder for concentrate for solution for infusion. Loading dose 4 mg/kg.
Support dose 2mg/kg weekly



S.Kniazkov, 2016

The life-span of a medicine – What actions for P&R deciders?

- Horizon scanning
- HTA
- Reimbursement
- Pricing
- Responsible use
- Real life effectiveness

The life-span of a medicine – What actions for P&R deciders?

- Horizon scanning

- HTA
- Reimbursement
- Pricing

- Responsible use
- Real life effectiveness

Who are the competent authorities?

- Market Authorization:
  - Harmonized at the EU level
  - European Medicines Agency (EMA) supplemented by national regulatory agencies in the member states
- Pricing and reimbursement:
  - National competence of the member states
  - Need to comply with the EU Transparency Directive (time line +++)
  - Which institutions?

Country	Authorization	Pricing	Reimbursem.
AT	MA	MoH	SHI
BE	MoH	MoE	MoSA
BG	MA	MoH	SHI
CH	MA	MoH	MoH
CY	MA	MoH	MoH
CZ	MA	MA	MA
DE	MA	MoH/FJC	MoH/FJC/SHI
DK	MA	–	MA
EE	MA	MoSA	MoSA
EL	MA	MoH	MoH
ES	MA	MoH/FJC	MoH
FI	MA	MoH	MoH
FR	MA	FJC	SHI
HR	MA	SHI	SHI
HU	MA	MoH/SHI	SHI

S.Vogler *et al*

Country	Authorization	Pricing	Reimbursem.
IE	MA	MoH	NHS
IT	MA	MA	MA
LT	MA	MoH	MoH
LU	MoH	MoE	SHI
LV	MA	NHS	NHS
MT	MA	MoH	MoH
NL	MA	MoH	MoH/SHI
NO	MA	MA	MA
PL	MA	MoH	MoH/SHI
PT	MA	MA	MA
RO	MA	MoH	MoH/SHI
SE	MA	PRA	PRA
SI	MA	MoH	SHI
SK	MA	MoH	MoH
UK	MA	MoH	MoH

S.Vogler *et al*

Reimbursement

- European countries do a rational selection of medicines funded out of public sources via:
- Positive lists (= formulary):
  - Definition: List of medicines that may be prescribed at the expense of the third party payer
  - Practice: In 24 EU Member States (in all but DE, EL, ES, UK) - in the out-patient sector
  - Additionally, hospital pharmaceutical formularies

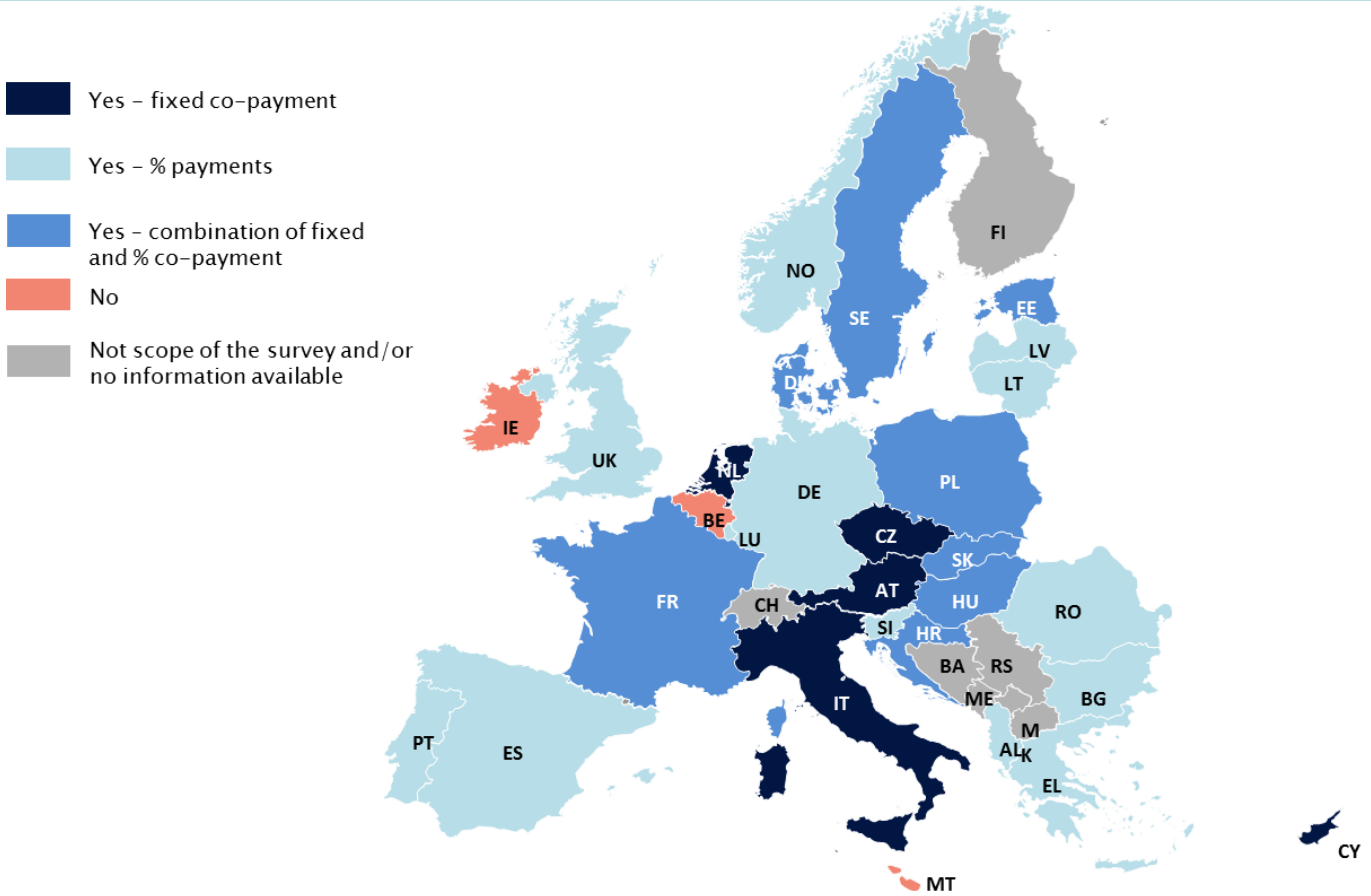
Reimbursement

- Negative lists:
  - Definition: List of medicines which cannot be prescribed at the expense of the third party payer
  - Practice: Negative lists are less common (DE, HU, UK)

Reimbursement - copayments

- Reimbursement does not always mean full cost coverage:
  - Copayment as a percentage linked to pathology (FRA, etc.)
  - Copayment as a percentage linked to population groups
  - Copayment as deductibles
  - Copayment as a fee (ITA, AUT, etc.)

Reimbursement - copayments



WHOCC, 2016

How are inclusion/exclusion decisions made?

- In most cases, decision is based on a formal evaluation: **Health Technology Assessment**
- „*Health technology Assessment (HTA) is a multidisciplinary process that summarises information about the medical, social, economic and ethical issues related to the use of a health technology in a systematic, transparent, unbiased, robust manner*“

WHOCC, 2016

Health Technology Assessment

- In the context of P&R, HTA can rely on:
  - Medical criteria
  - Pharmacologic criteria
  - Medico-economic criteria
  - A mixture of all this
- How can one assess innovation?

Innovation in health products

- Innovation is considered as a positive thing but it remains difficult to define it
- Improvement of relative efficacy/efficiency compared with the current standard of care?
- For manufacturers: any new product that is different from existing ones
- Regulators: provide better outcomes than existing technologies in the same application

Pricing of medicines

- **<u>There is</u>** medicines price control in the European countries:

EU Member State	Pricing of medicines in the out-patient sector	
	State/Authority	Pharmaceutical company
Albania, Belgium, Cyprus, Greece, Lithuania, Luxembourg, Turkey	All medicines	------
Denmark*	-----	All medicines
Austria, Croatia, Czech Republic, Denmark*,Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Poland, Spain, Sweden, Switzerland, Slovakia, Slovenia, United Kingdom**	Reimbursable medicines	Non-reimbursable pharmaceuticals
Malta	Medicines in the public sector	Medicines in the private sector
Bulgaria, Iceland, The Netherlands, Norway, Portugal, Romania	Prescription-only medicines (POM)	Over-The-Counter medicines (OTC)

WHOCC, 2016

Price control mechanisms

- In most countries governments control market access and/or pricing of pharmaceuticals using:
  - Direct price control
  - Indirect price control
  - Utilization control
  - A mix of all these methods

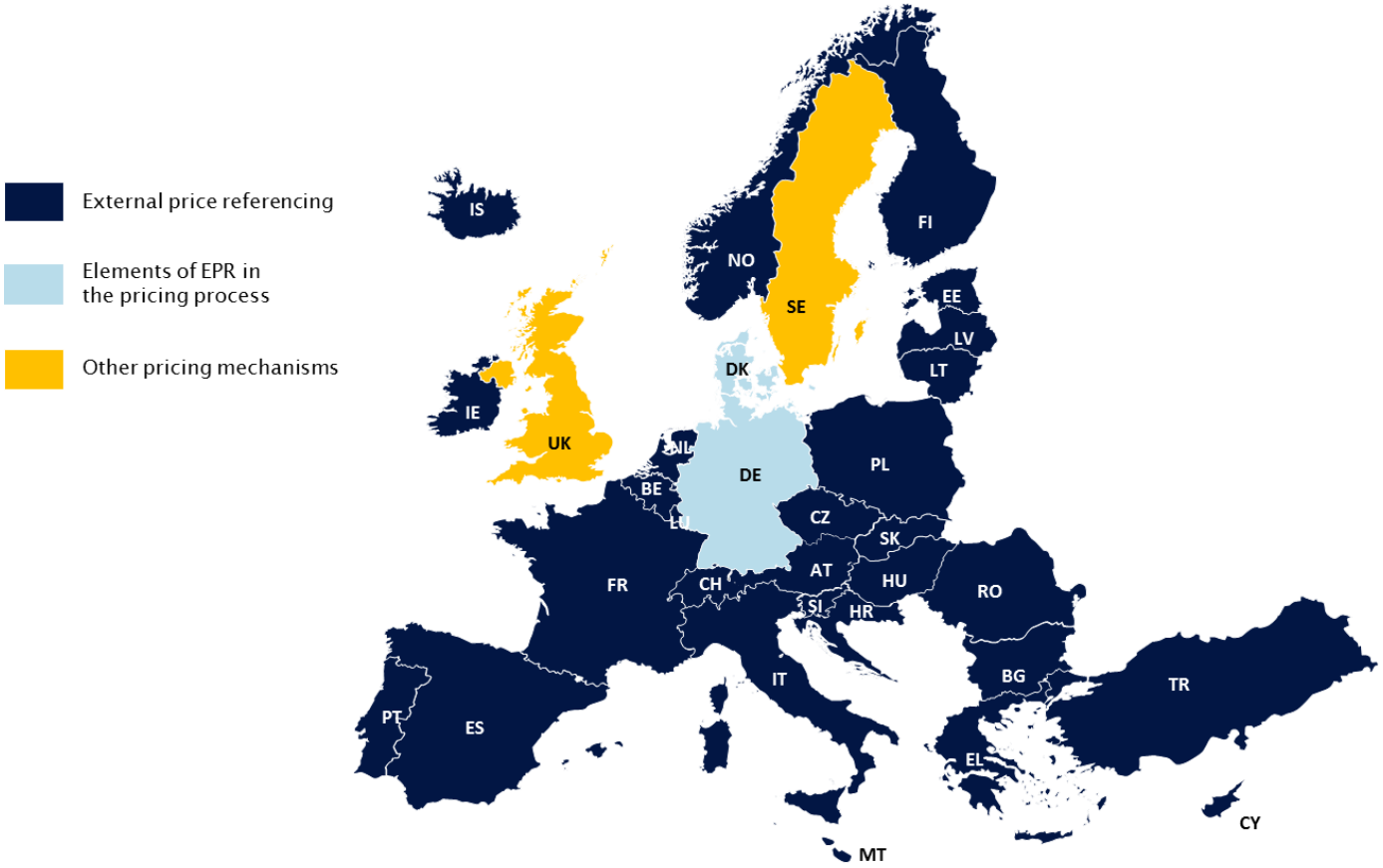
Direct price control

- Government agencies set drug prices following a defined doctrine
- Company submits a dossier through which it argues how the product should be priced
- Various tools can be used:
  - Example 1: External Reference Pricing
  - Example 2: Value Based Pricing

Direct price control

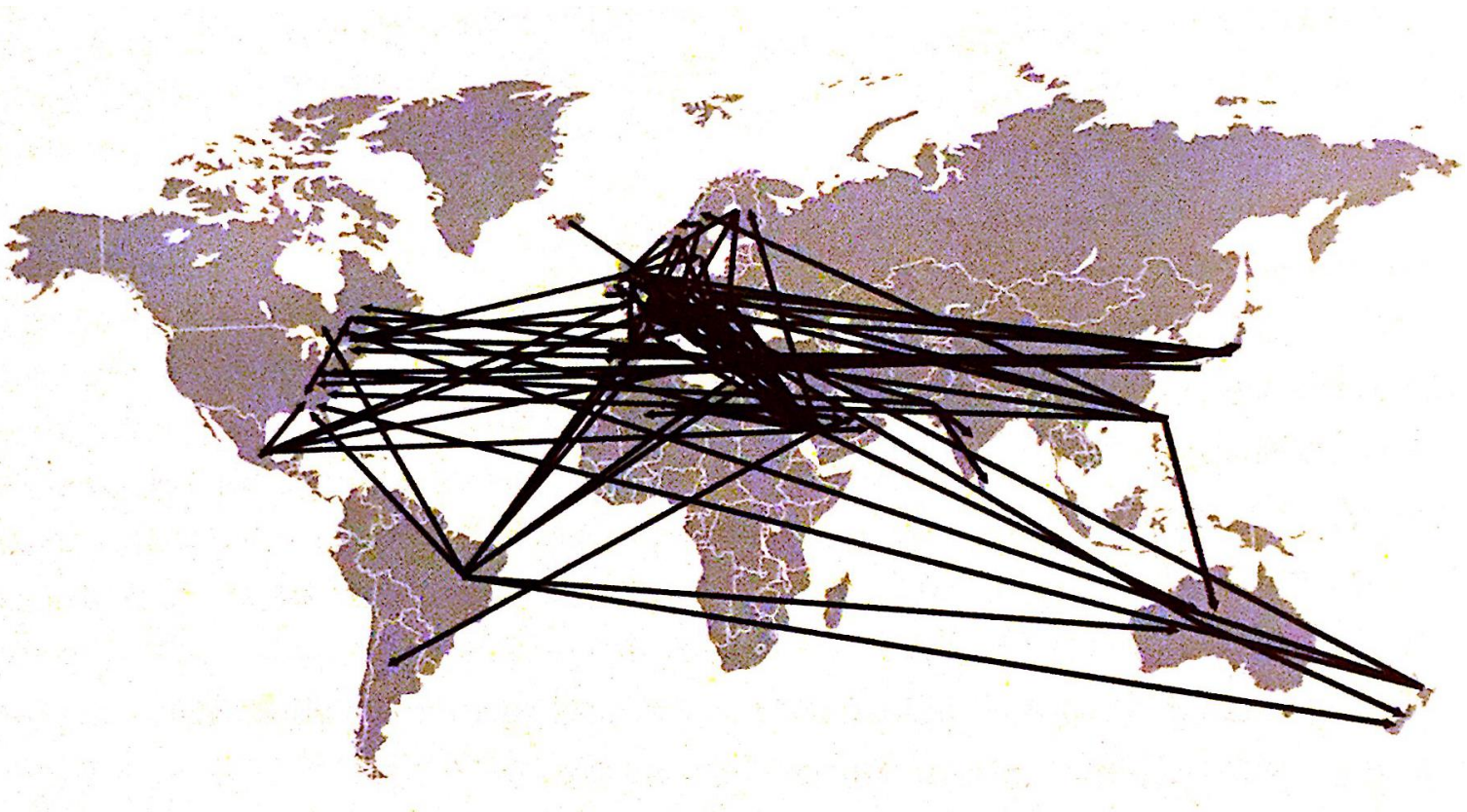
- Example 1: External Reference Pricing
  - The practice of using the price(s) of a pharmaceutical product in one or several countries in order to derive a benchmark (or reference price) for the purposes of setting or negotiating the price of the product in a given country
  - Almost all the European countries use this tool…
  - … but with important methodology variations (number of reference countries, calculation of the reference price, etc.)

Where is ERP used?



WHOCC, 2016

Who is looking at whom?



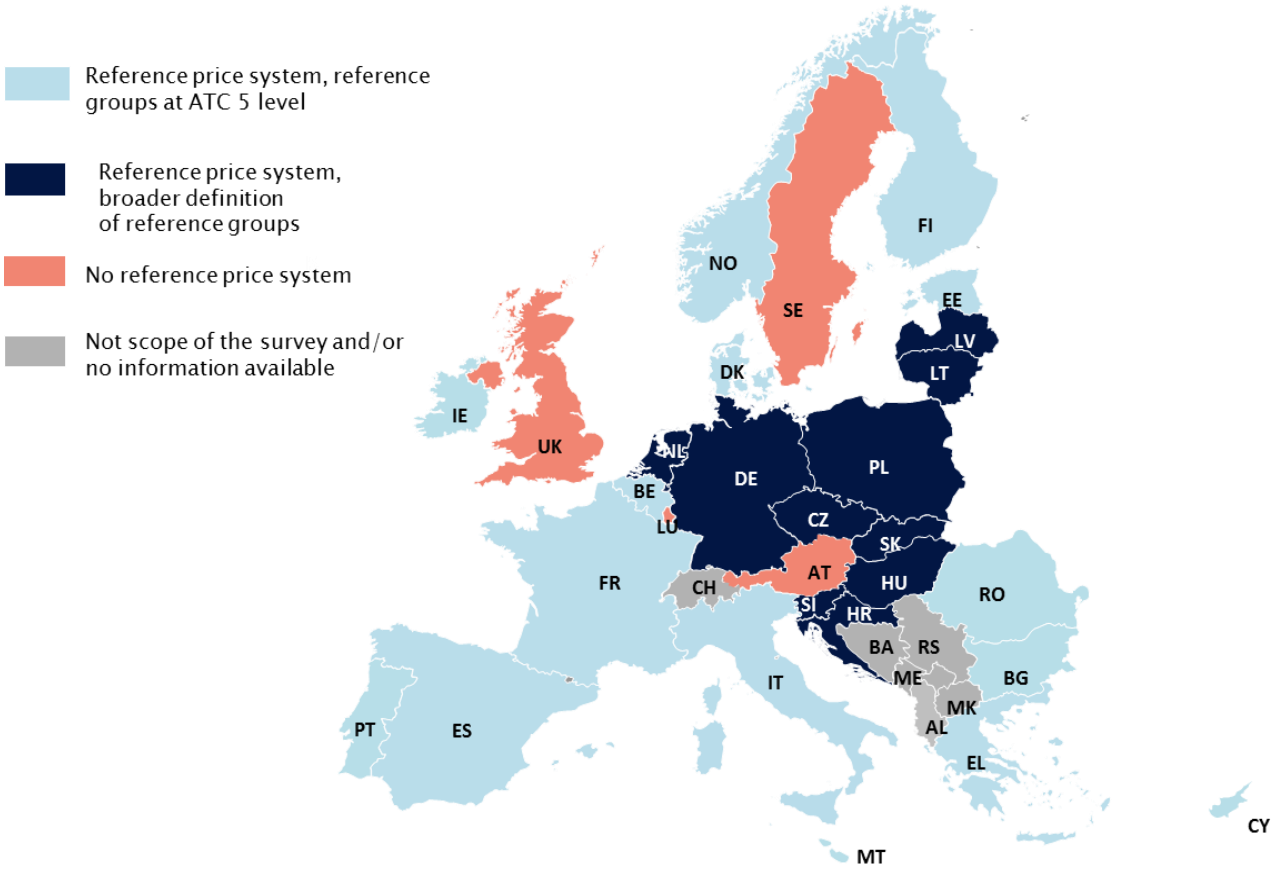
Direct price control

- Example 2: Value Based Pricing
  - Countries set prices for new medicines (and/or decide on reimbursement) based on the therapeutic value that the medicine offers
  - Value usually assessed through health technology assessment and/or economic evaluation
  - Countries define their own specific doctrine
  - Example: Sweden (TLV)

Indirect price control

- Interventions that direct choices or influence manufacturers price expectations
- Example 1: Internal Reference Pricing
  - For a medicine **fixed price or amount** (called reference price) is determined
  - The insured **person must pay the difference** between this price and the actual pharmacy retail price of the medicine (**in addition** to any fixed co-payment or percentage co-payment rates)
  - Can be set at ATC4 or ATC5 level

Where is IRP used?



WHOCC, 2016

Indirect price control

- Interventions that direct choices or influence manufacturers price expectations
- Example 2: Utilization of economic evaluation
  - In the UK, NICE's threshold is set at £30,000/QALY
  - Forces companies to integrate in their model a price which is compatible with this threshold

Utilization control

- Ensuring volumes are controlled and drugs go to the right patients (see later on MEAs)
  - "Envelope agreements"
    - Multi-annual contract specifying maximum sales volumes
    - If volumes exceeded: discounts or price rebates
    - Need for epidemiological data
  - Reimbursement for defined diseases stages
  - Reimbursement for defined treatment durations

Particular cases

- The case of in-patient medicines
- The case of generics
- Managed Entry Agreements

Particular cases

- The case of in-patient medicines
- The case of generics
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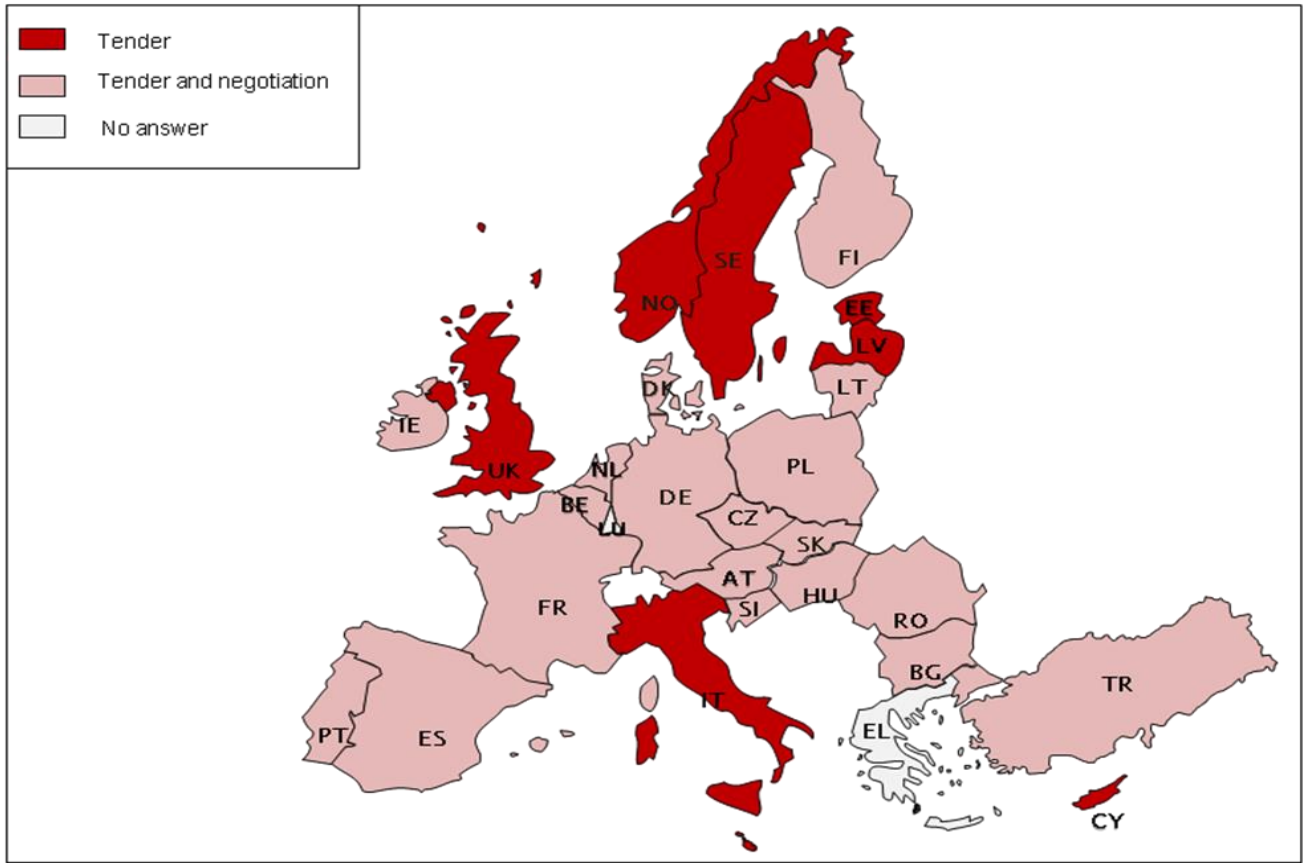
Pricing of inpatient medicines

- Discussions occur generally at the hospital level
- Means of pricing:
  - Direct negotiations with industrials
  - Tendering
- Is some countries, some hospital drugs prices are negotiated at the national level ("*liste en sus*" in France)

Hospitals procurement strategies



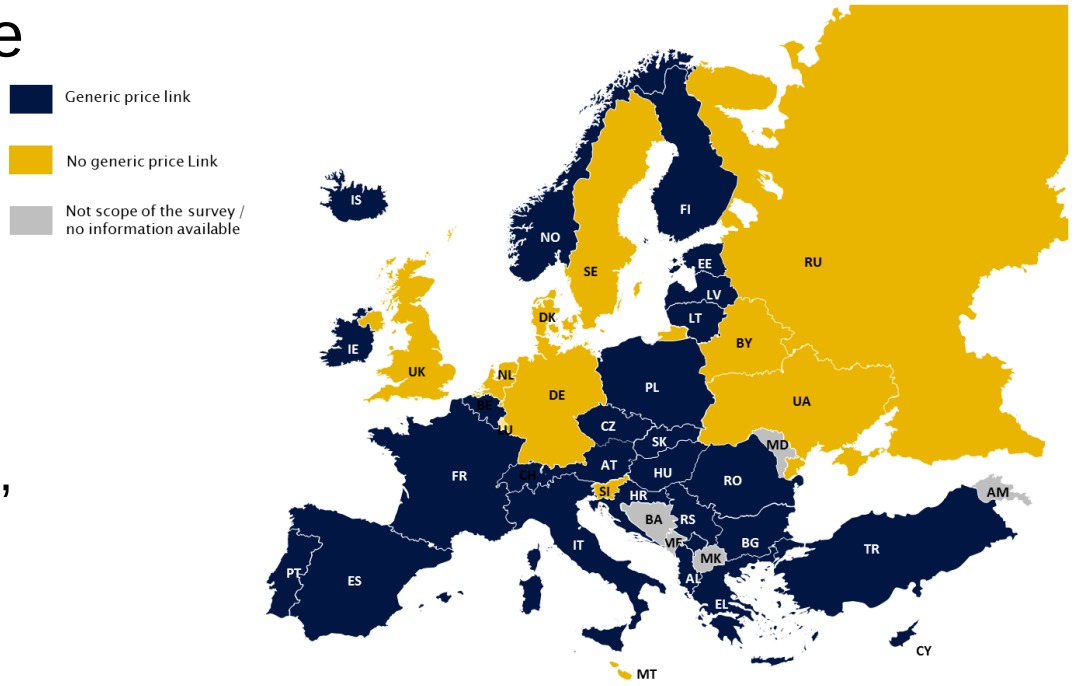
PHIS

Particular cases

- The case of in-patient medicines
- The case of generics
- Managed Entry Agreements

Pricing of generics

- Most countries regulate prices of generics (price linkage):
  - FRA: 60% of originator price
  - LAT: 30% of originator price for the first generic, then 10% less for the followings, then 5%
  - Etc.



Particular cases

- The case of in-patient medicines
- The case of generics
- Managed Entry Agreements

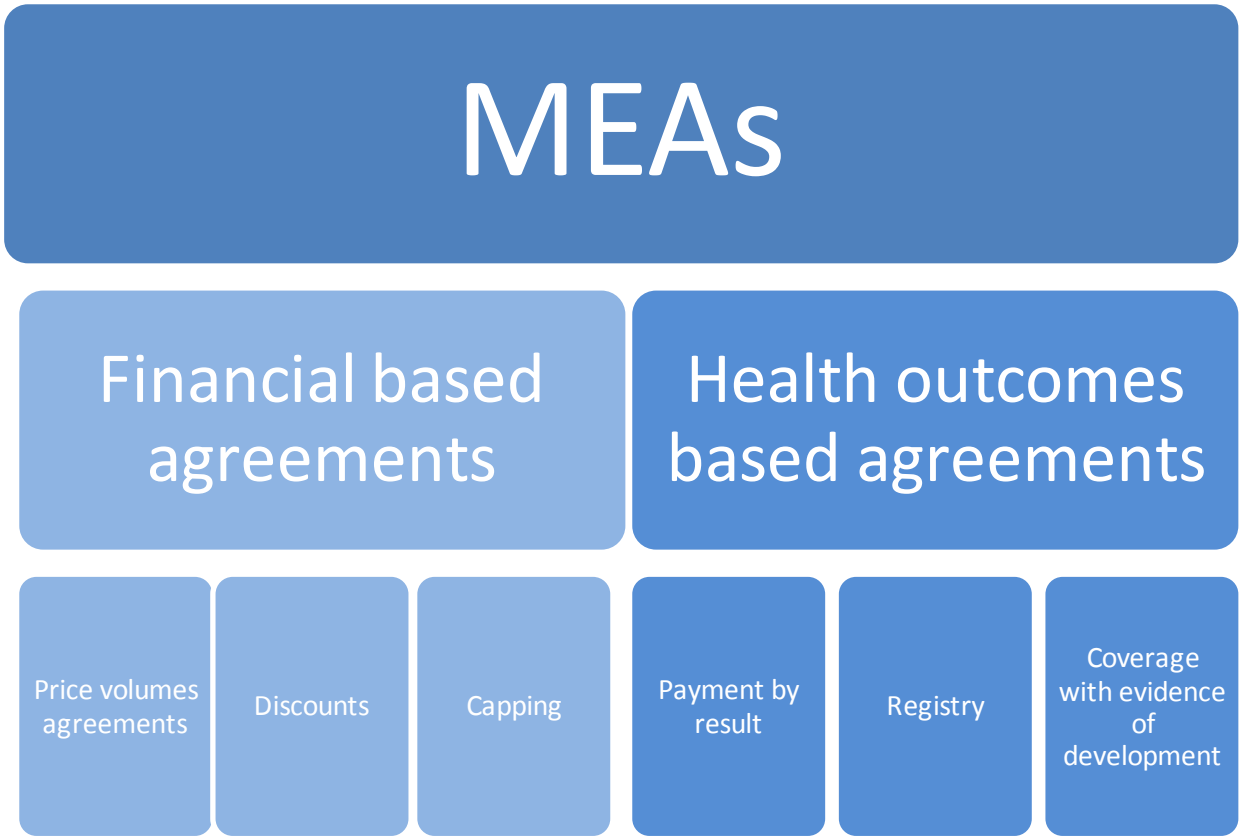
The current situation

- Market Authorization is often granted at earlier stages
- Leads to higher uncertainty on:
  - Effectiveness in real life
  - Future utilization
  - Position in the therapeutic strategy
  - Budget impact
- Higher prices for new medicines
- Higher social demand (“all” and “now”)

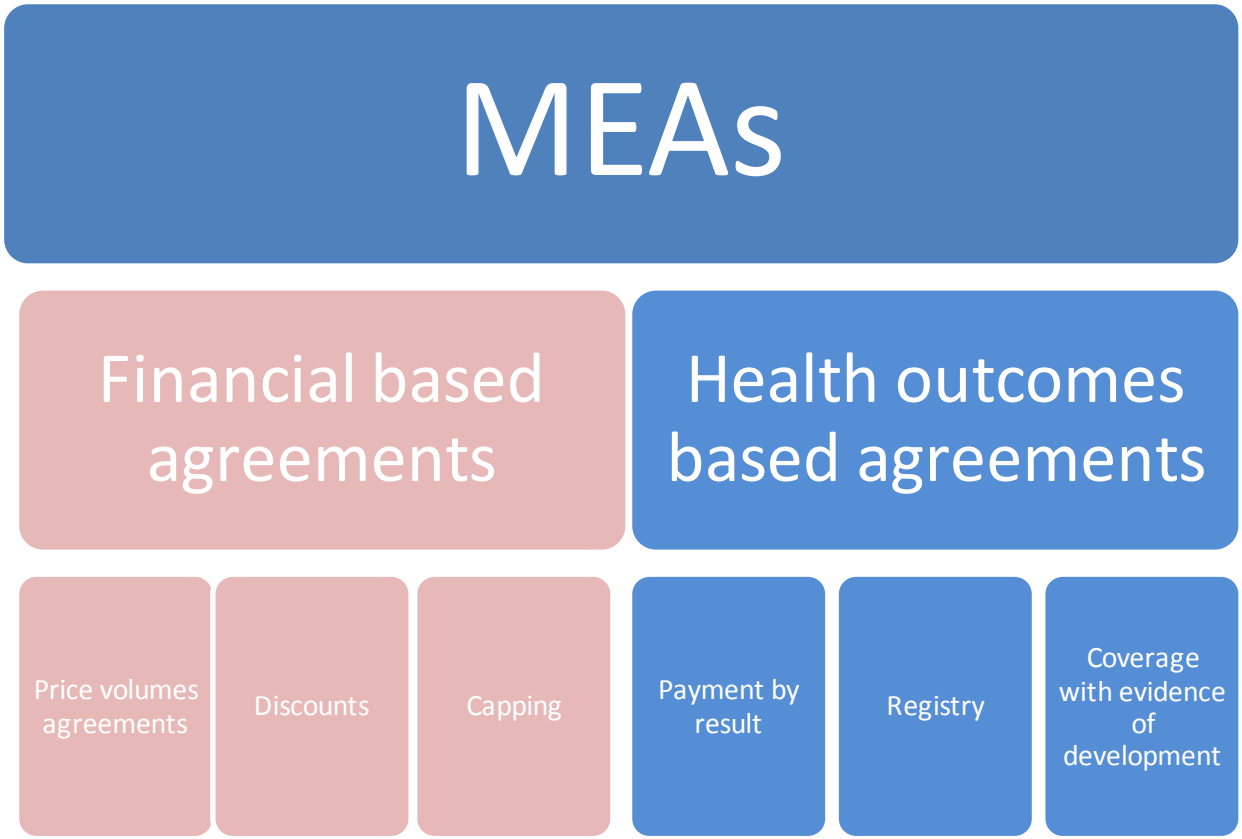
A possible solution

- **Managed Entry Agreements** (MEAs), (Klemp *et. Al., 2011)*:
  - *"An arrangement between a manufacturer and payer/provider that enables coverage or reimbursement of a health technology subject to specific conditions".*
  - *"These arrangements can use a variety of mechanisms to address uncertainty about the performance of technologies or to manage the adoption of technologies in order to maximize their effective use or limit their budget impact".*

Different types of MEAs



Different types of MEAs



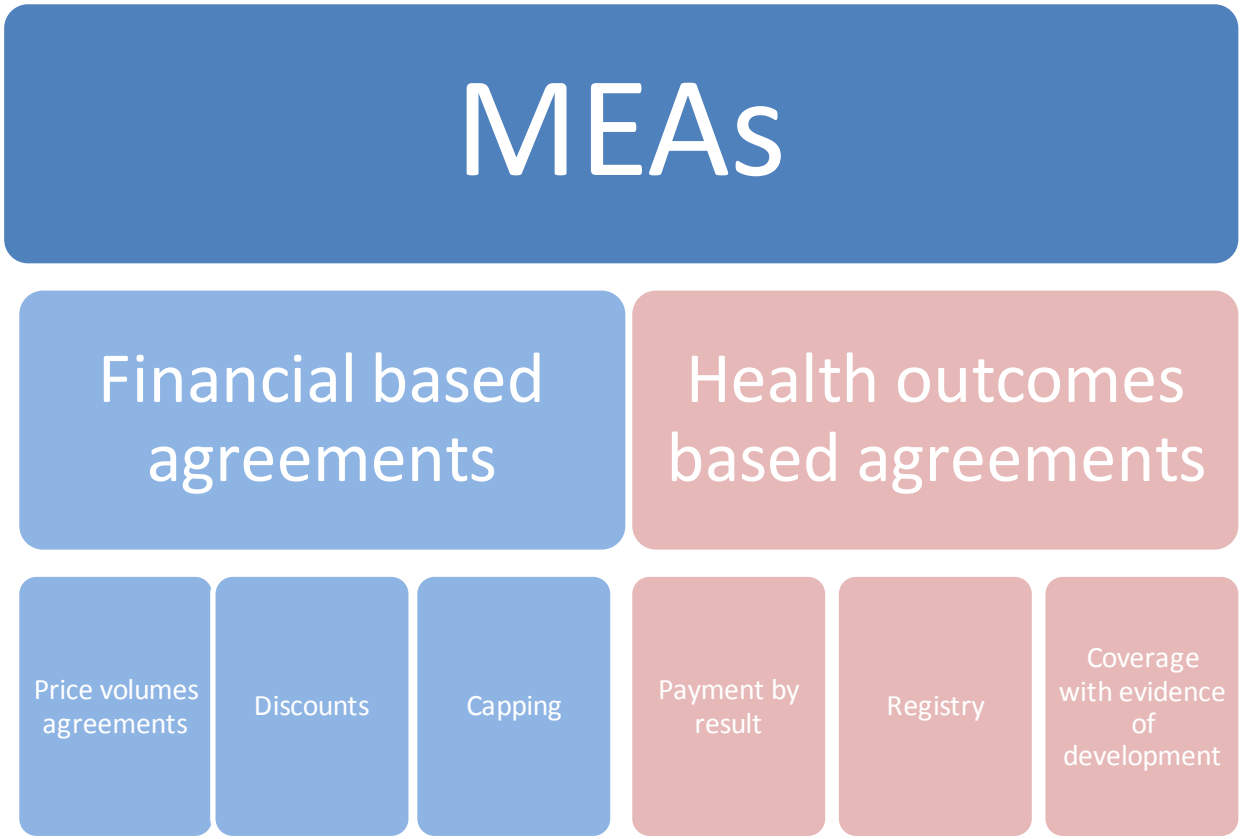
Price volume agreements (PVAs)

- Concept:
  - Limit access to the target treatment population
  - For each drug, a tiered repayment structure for different levels of sales is defined ex ante
  - At the end of an agreed period of time, repayments are usually converted into a price cut
  - PVA is an instrument limiting budget impact due to non-approved use
- Very frequently used in Europe (e.g. France +++)

Capping

- Concept ("utilization capping"):
  - Establishment of a dose cap after which the manufacturer pays for any additional dose required
  - Usually, an average number of doses for one patient is calculated ex ante; if patients consume more, those are provided to the system free of charge
- Ranibizumab in the UK: capping at 14 doses per patient.

Different types of MEAs



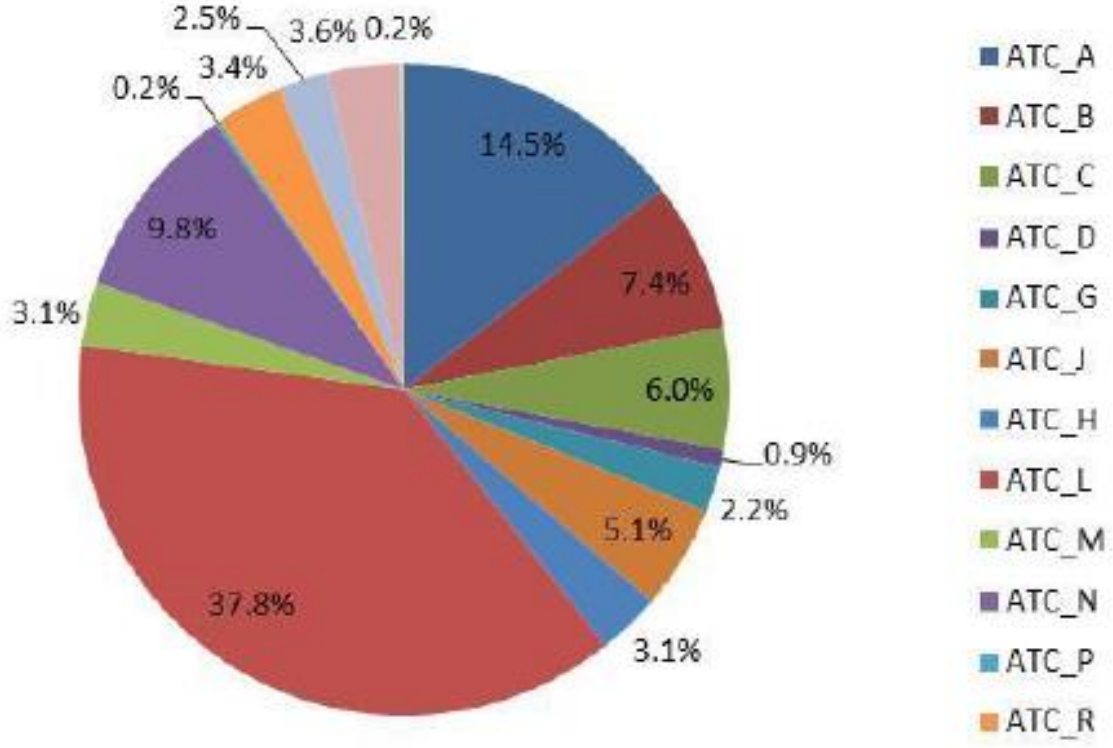
Payment by result

- Concept:
  - Evaluate the rate of “treatment non-responders”
  - For each and every non-responder, the drug manufacturer is either expected to grant a discount to the cost of initial treatment cycles or to refund the full cost of therapy
  - This implies the need to develop strong monitoring systems (registries)
- Used a lot in Italy (AIFA), HepC in France

Coverage with Evidence Development

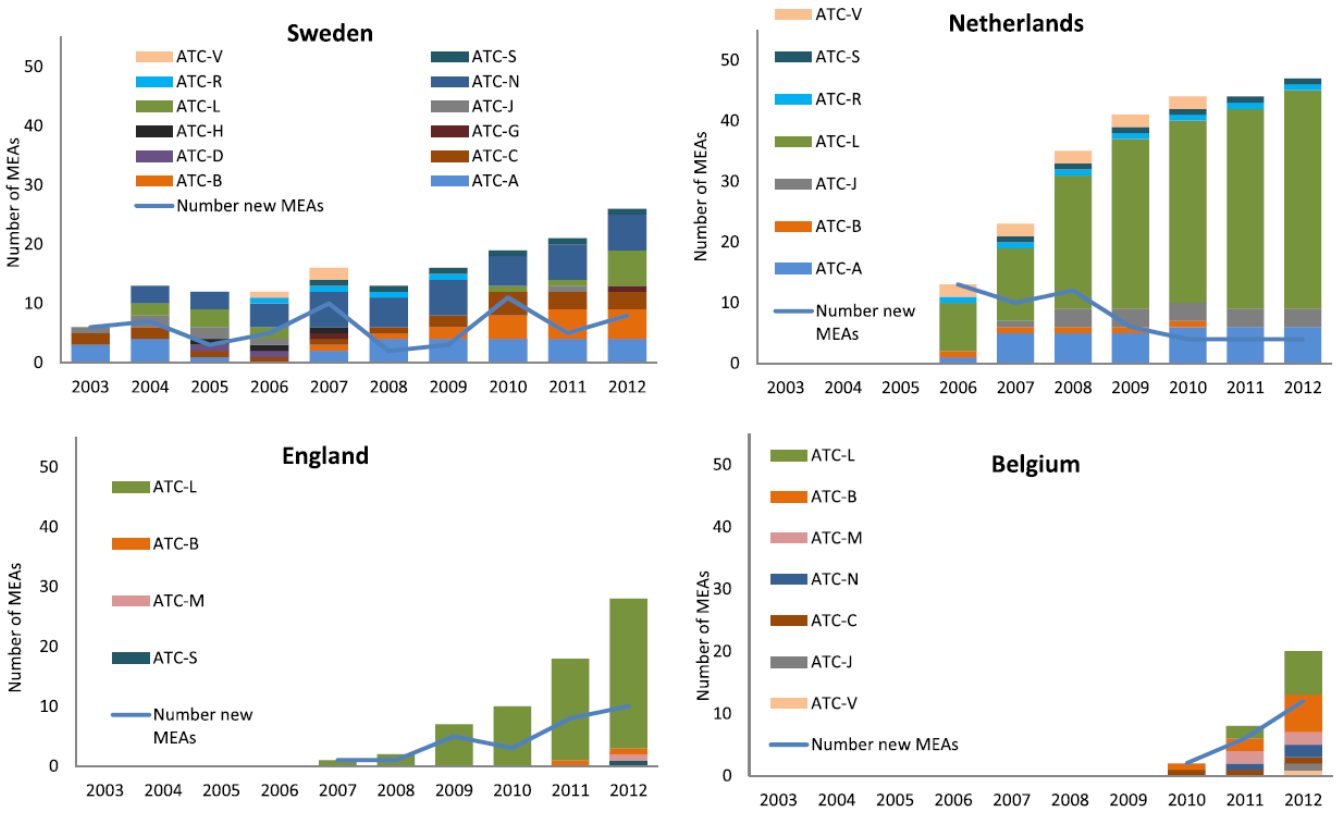
- Concept:
  - Product is covered or reimbursed but decision (or confirmation) is conditioned upon the collection of additional population-level evidence
- Examples: orphan diseases in the Netherlands
  - Hospitals were required to conduct outcomes research studies to generate evidence on appropriate drug use and effectiveness in daily practice and real-world cost-effectiveness
  - Reevaluation 4 years later: should the medicine be maintained on the reimbursement list?

Which drugs are subject to MEAs ?



Ferrario & Kanavos, 2013

A tool which is more and more used



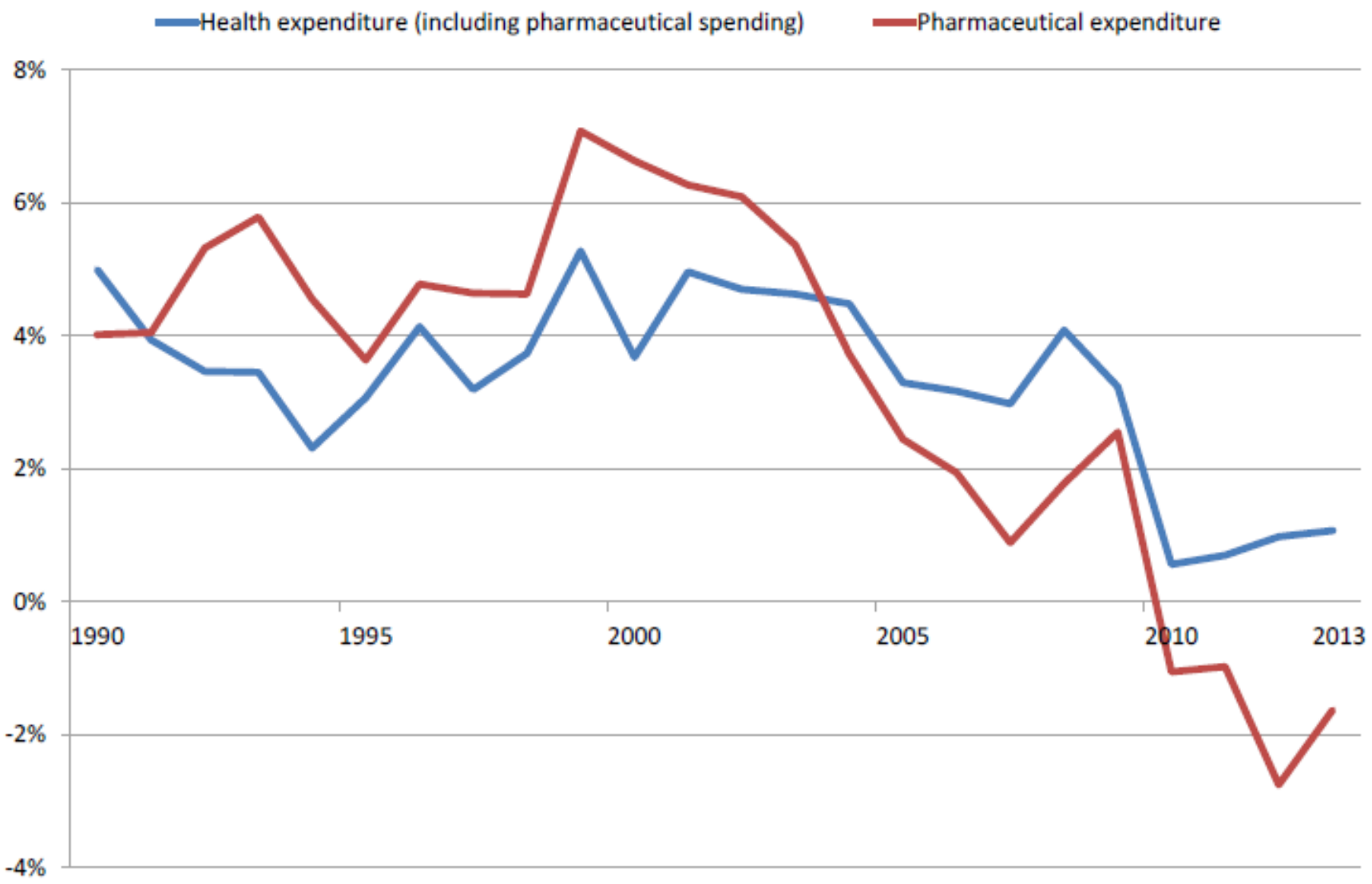
Ferrario & Kanavos, 2015

Where do we go from here?

Recent trends

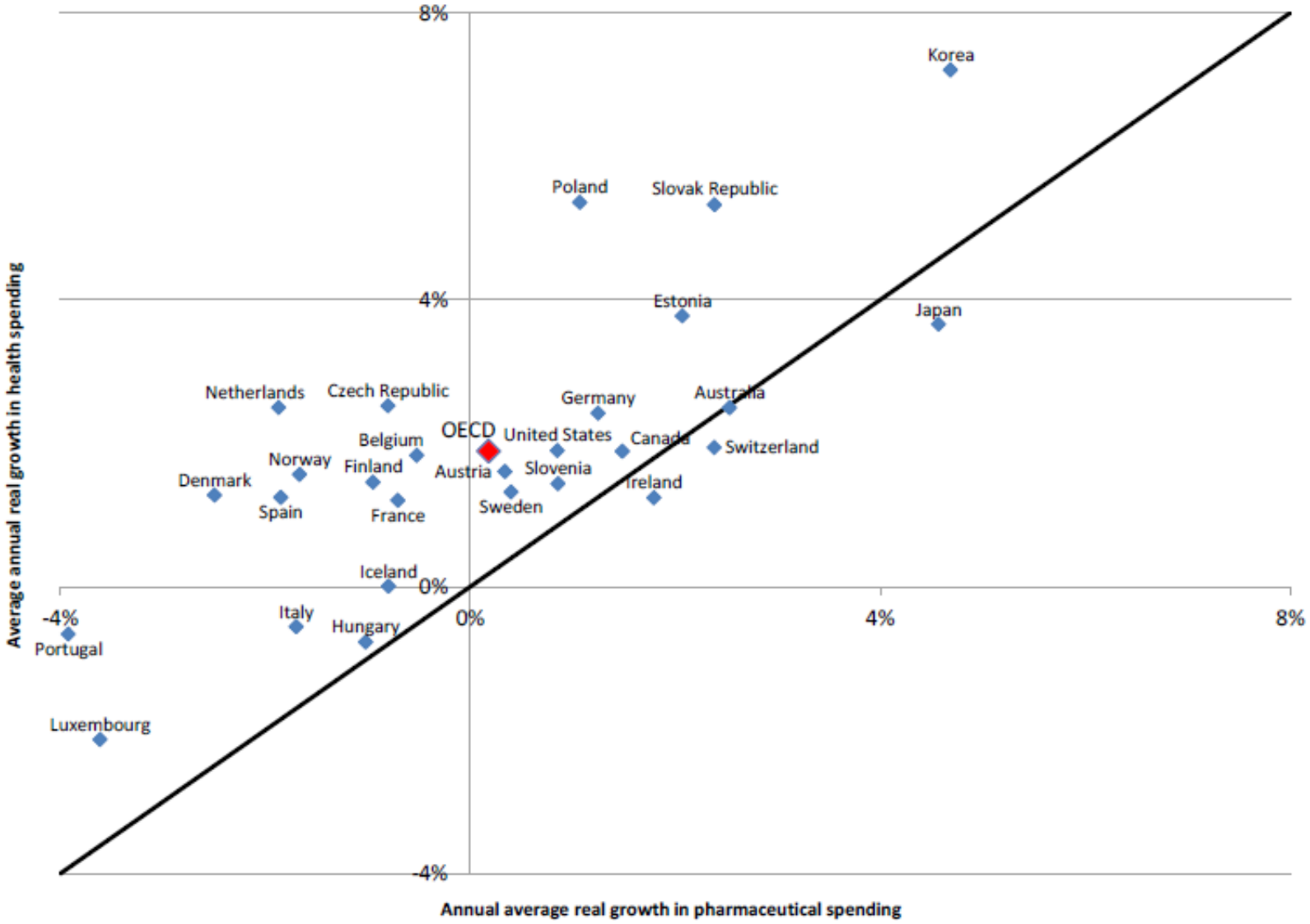
- The pharmaceutical market has been very affected by the economic crisis

Average annual growth



OECD 2016

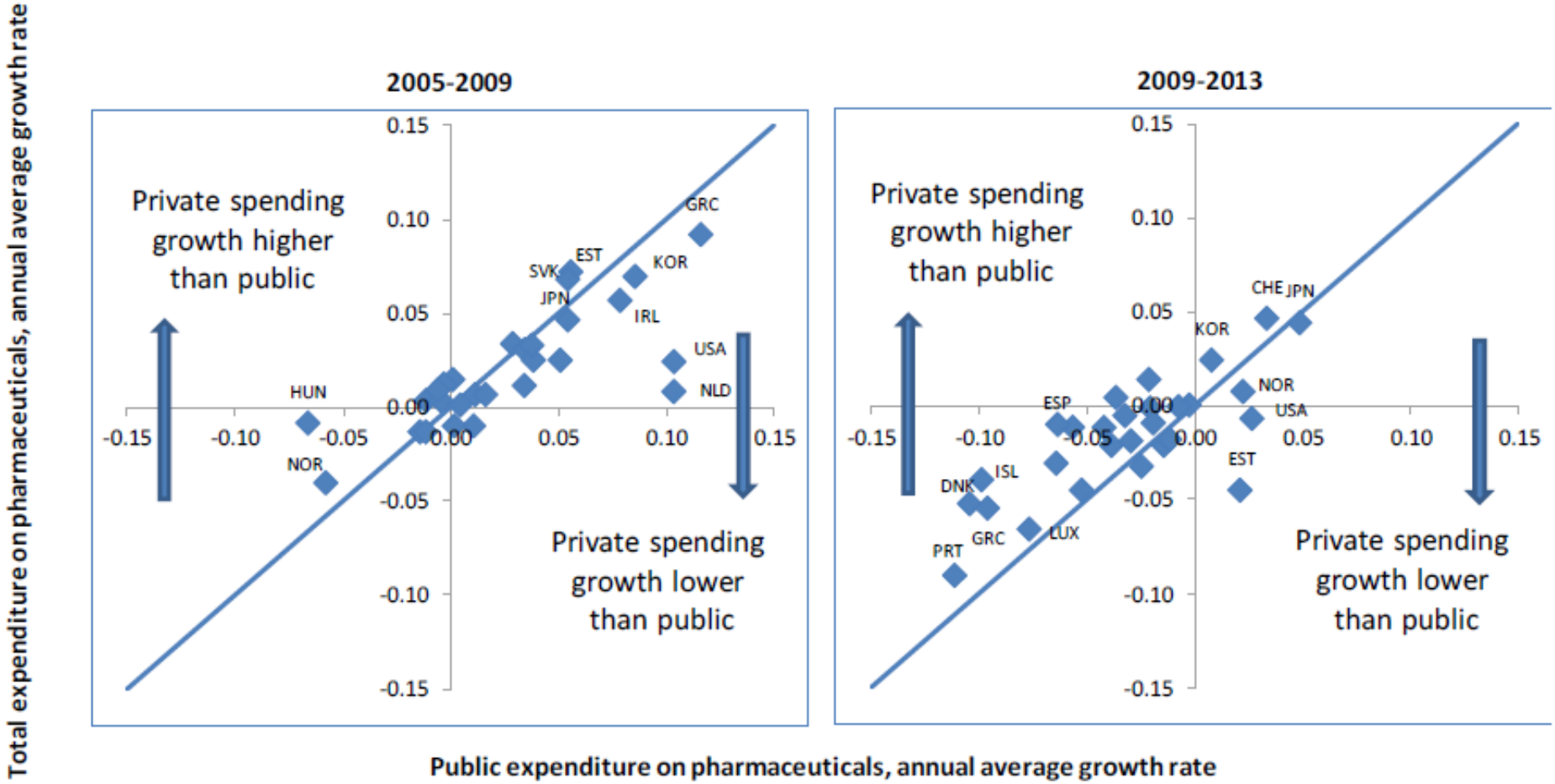
Average annual growth 2005-2013



Recent trends

- The pharmaceutical market has been very affected by the economic crisis
- There has been a clear shift towards more private funding of medicines

Average annual growth public vs. private

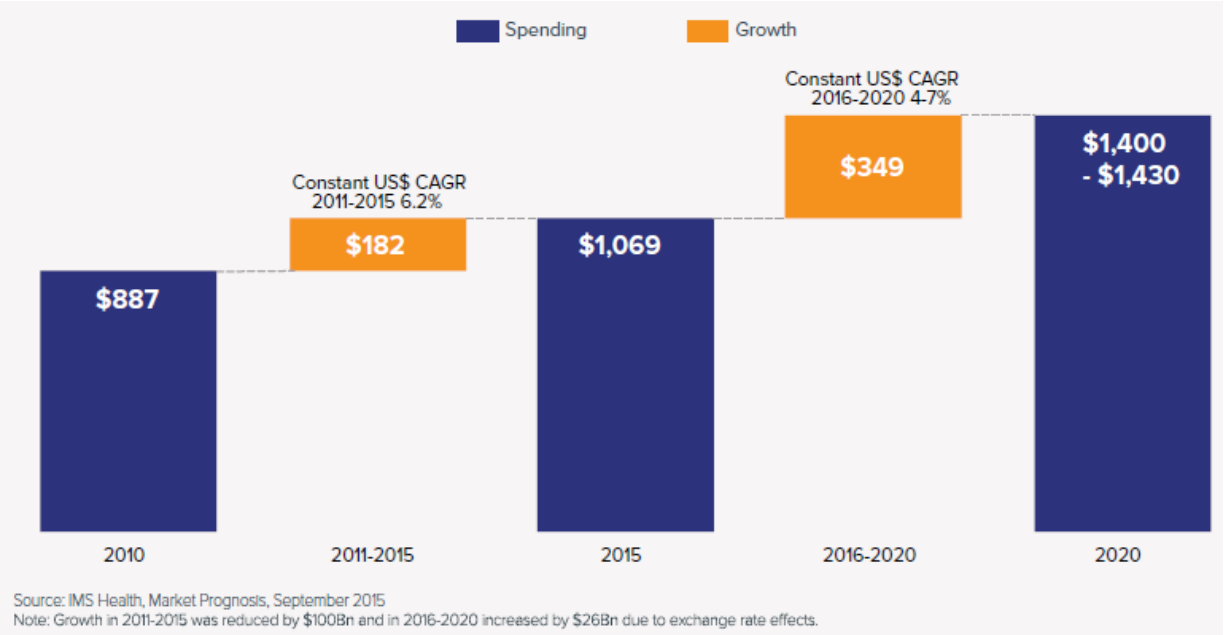


Recent trends

- The pharmaceutical market has been very affected by the economic crisis
- There has been a clear shift towards more private funding of medicines
- But the market is recovering quickly, which raises a lot of questions and interrogations

Future trends and key policy challenges

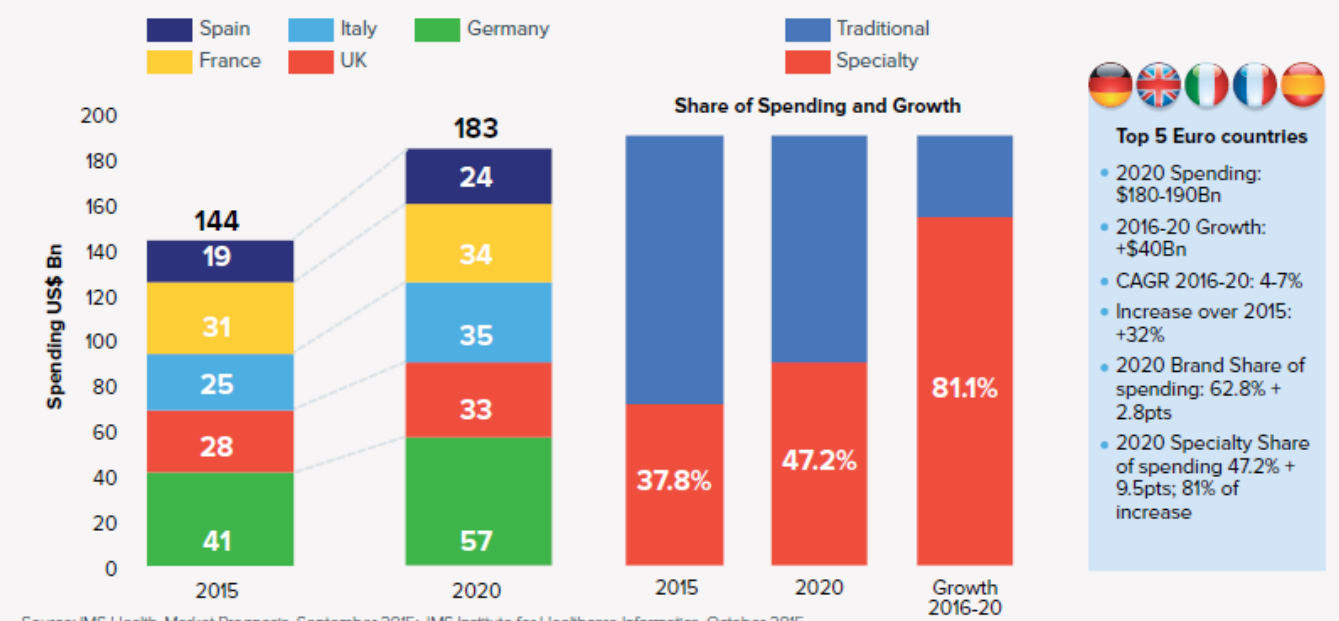
- The future pharmaceutical spending growth is likely to pick up again



Source: IMS Health, Market Prognosis, September 2015
Note: Growth in 2011-2015 was reduced by $100Bn and in 2016-2020 increased by $26Bn due to exchange rate effects.

Future trends and key policy challenges

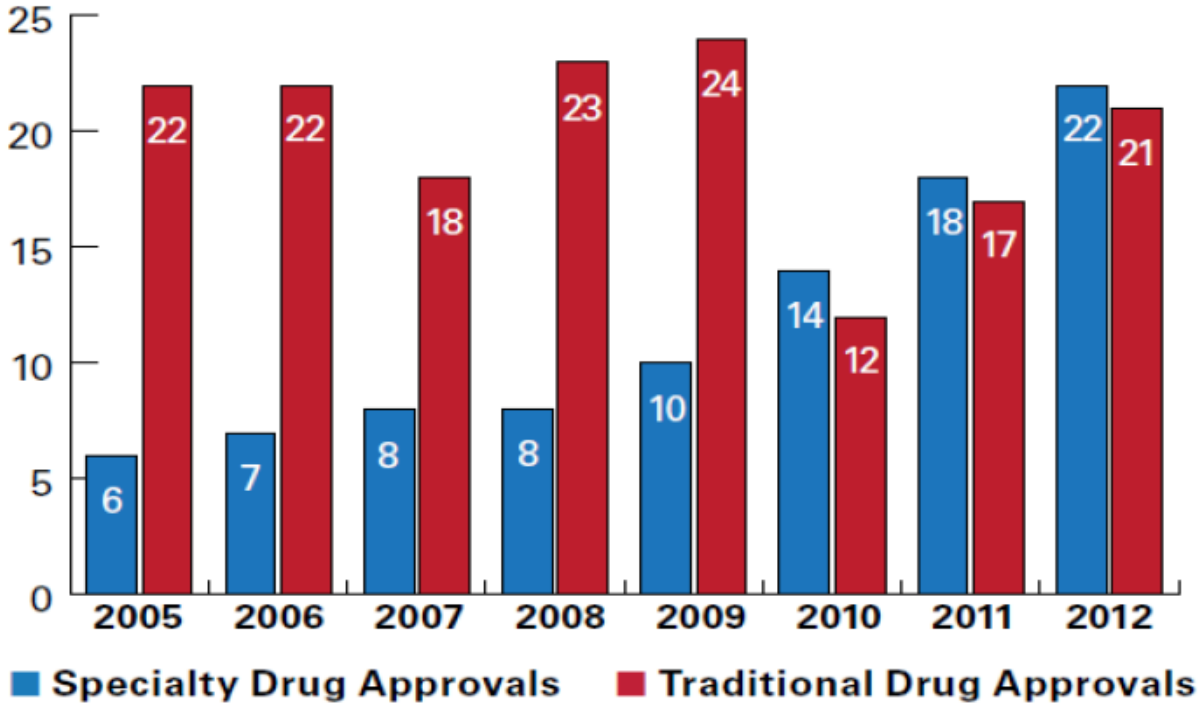
- Even if the growth in Western Europe is likely to be more limited



Source: IMS Health, Market Prognosis, September 2015; IMS Institute for Healthcare Informatics, October 2015
Note: Spending in US$ with actual and projected exchange rates. Growth in constant US$ based on average rates in Q2 2015 and projections of actual rates.

Future trends and key policy challenges

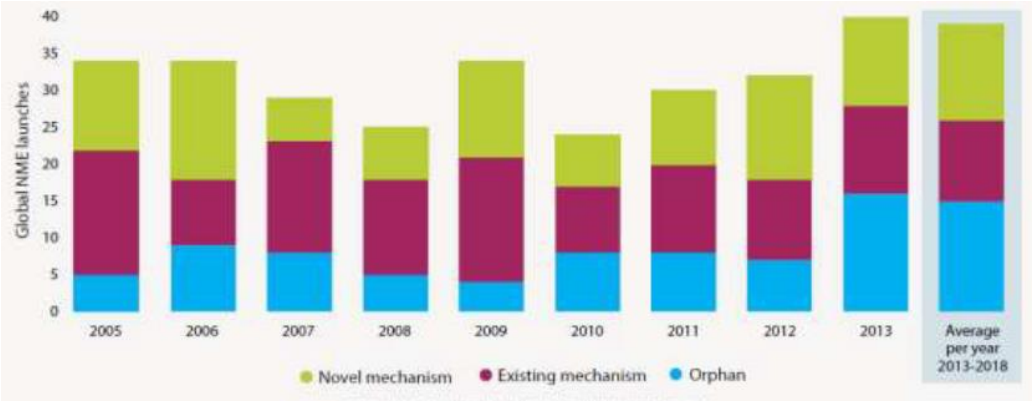
- But there has never been as many specialty drugs as today



Pricewaterhouse Coopers, 2013

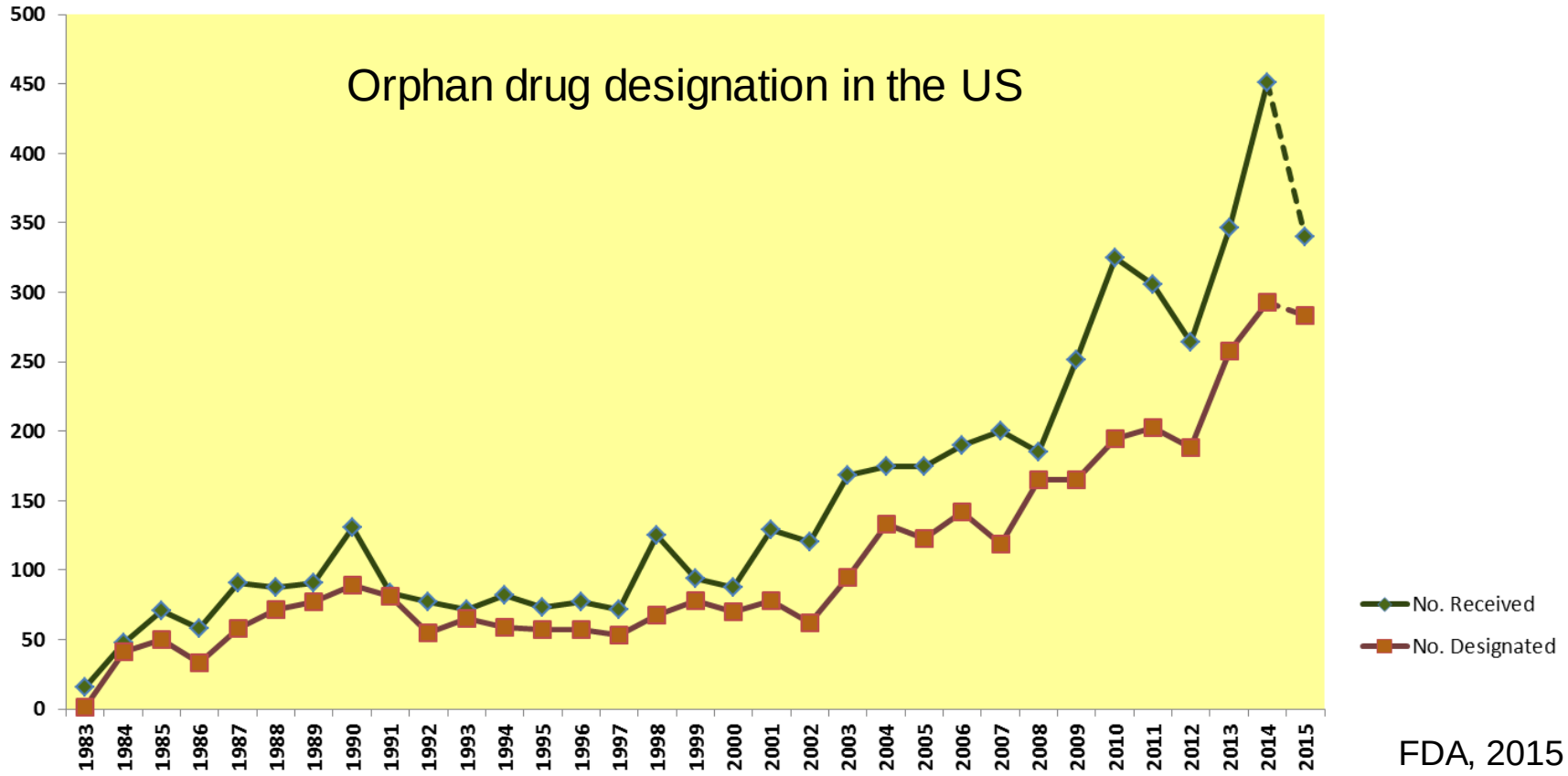
Future trends and key policy challenges

- The number of high cost drugs, their complexity and price will continue to grow
  - HepC
  - Oncology (targeted therapies, biomarkers, etc.)
  - Auto-immune conditions
  - Orphan drugs



IMS, 2014

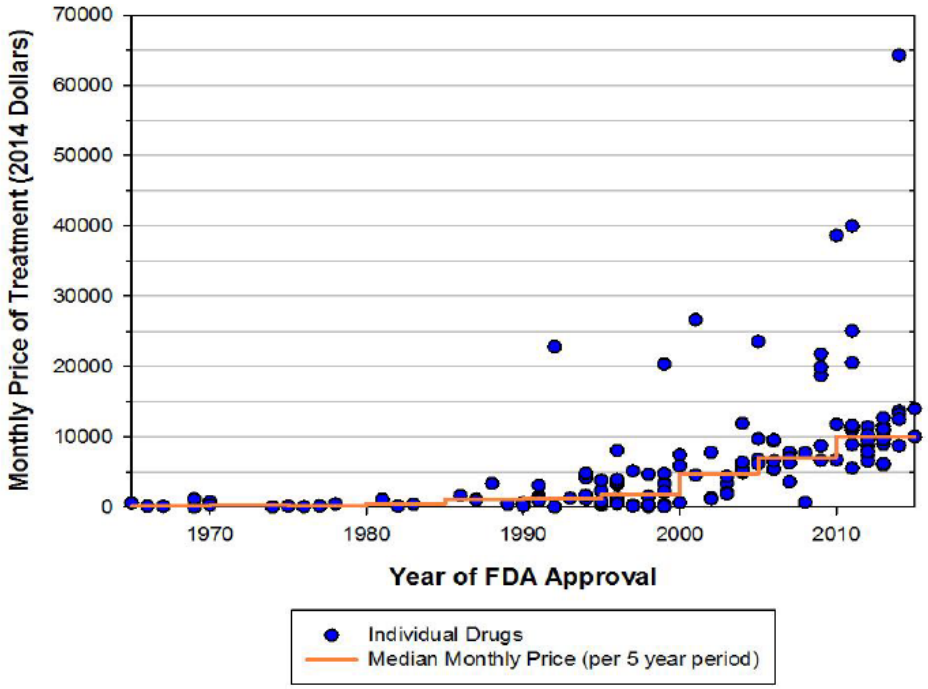
Future trends and key policy challenges



FDA, 2015

Future trends and key policy challenges

- The number of high cost drugs, their complexity and price will continue to grow



P.Bach, 2014

Future trends and key policy challenges

- What does all this imply ?
  - Questioning on the sustainability of these trends in the medium term for countries who can afford new medicines
  - Questioning on the accessibility for the other countries (fairness and justice)
  - A necessary reflection on the recent pricing developments (drugs have today become both too expensive and too cheap)

Medicine price discussion

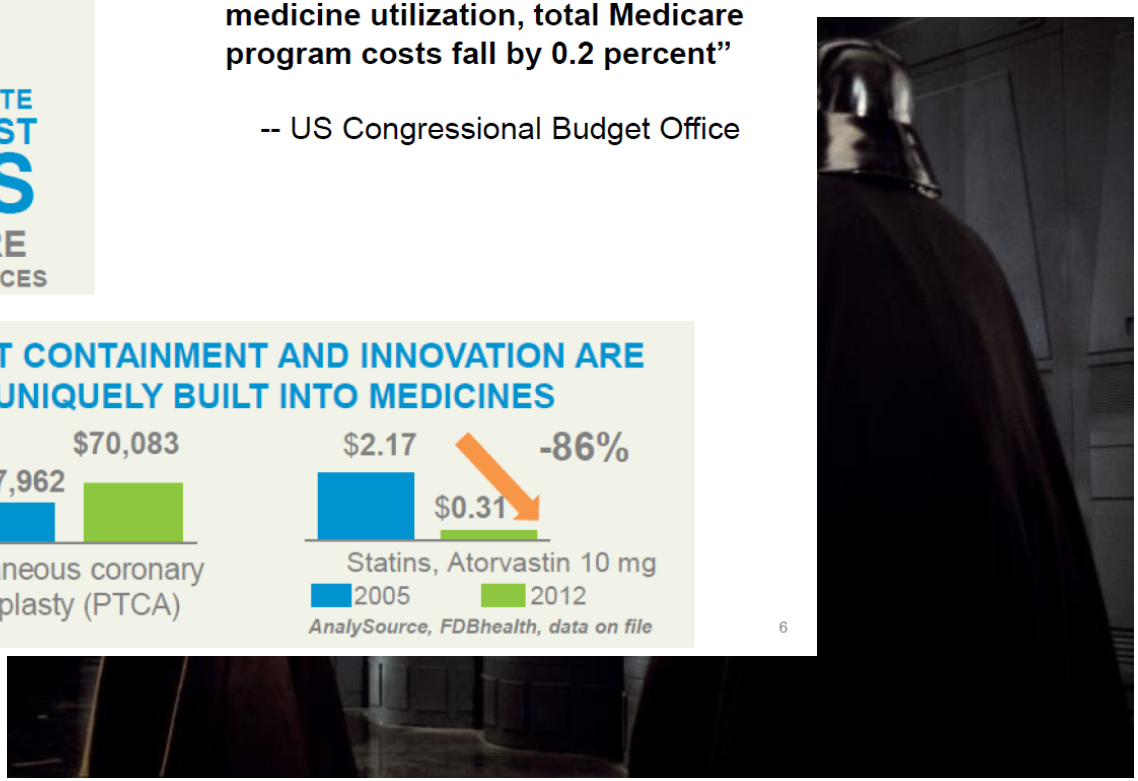
Innovative medicines deliver value today and long into the future

ssion

MEDICINES OFTEN CREATE
DOWNSTREAM COST
SAVINGS
BY AVOIDING MORE
EXPENSIVE MEDICAL SERVICES

"For every 1 percent increase in medicine utilization, total Medicare program costs fall by 0.2 percent"

-- US Congressional Budget Office



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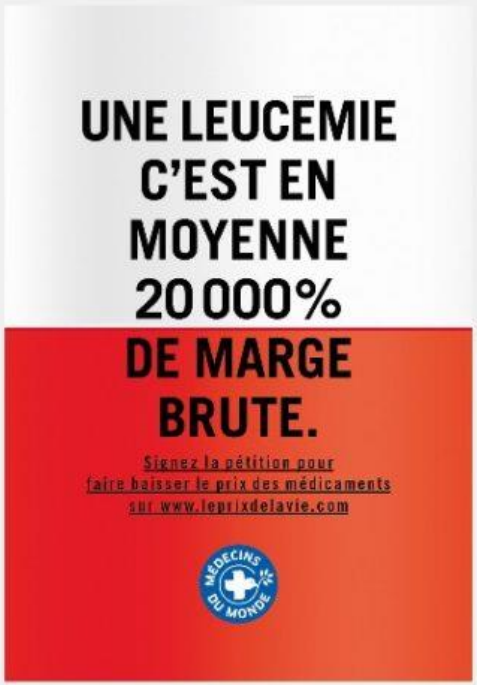


Why are drug expensive?

- Cost ?
- Value ?
- Power ?
- Prize ?

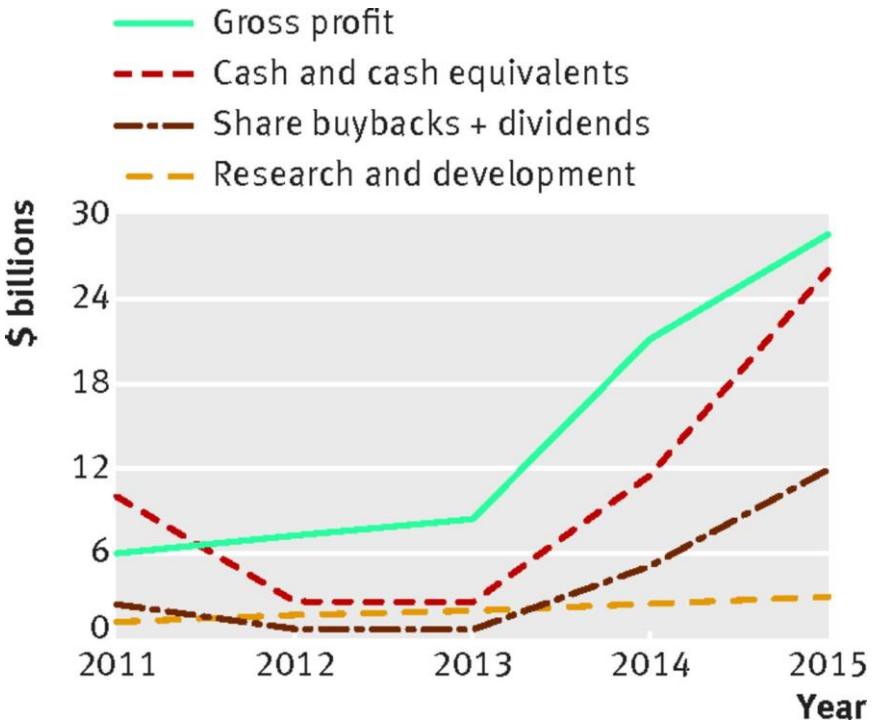
J.Scanell, 2015

Cost of R&D

- *We charge high prices because a drug is expensive to develop*
- Input-based pricing
- Is this argument valid? Mostly not

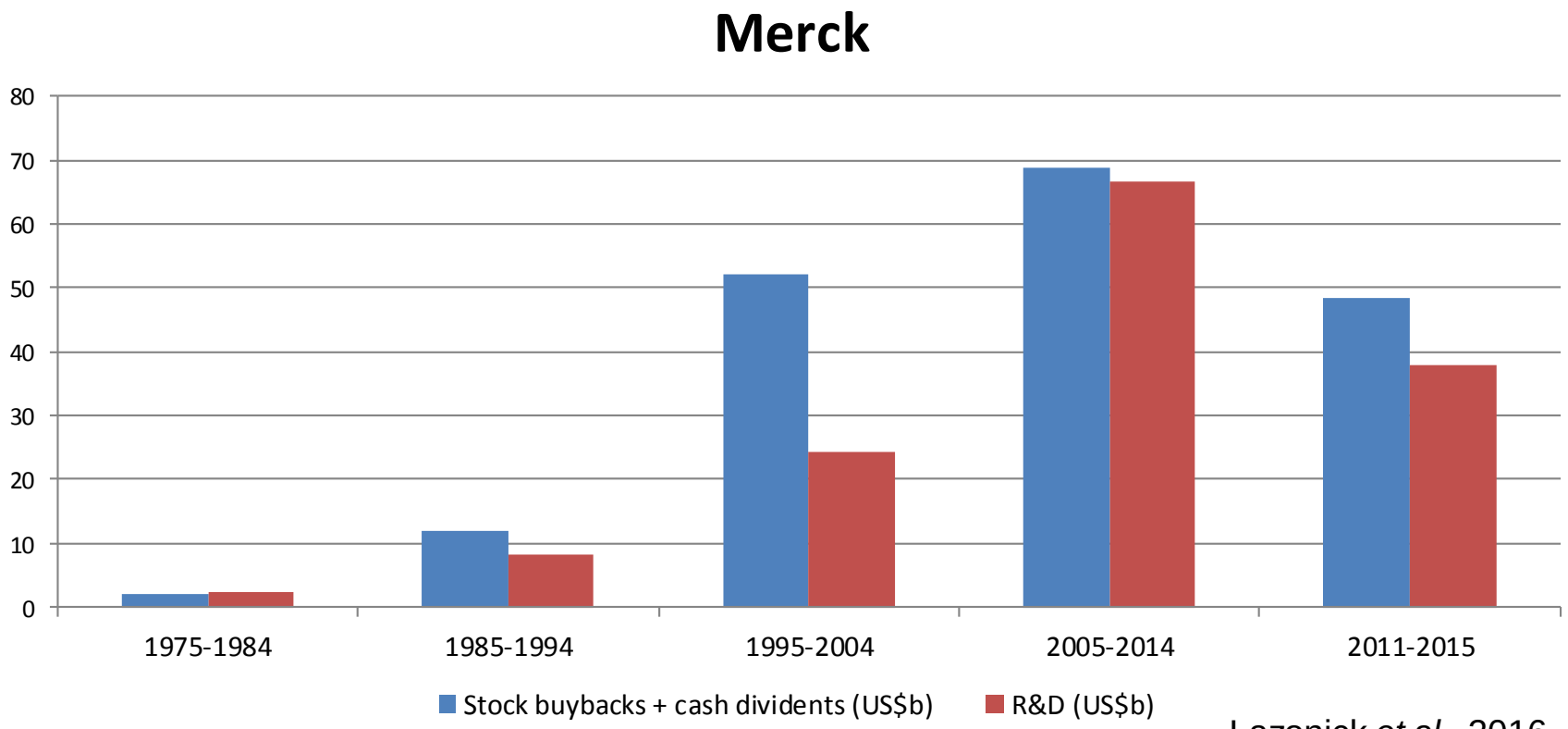
Cost of R&D

- Most of research paving the way to new drug discovery is publically funded (85% for cancer, Kantarijan *et.al., 2015)*
- Industry might actually invest less than 2% of their revenue on basic research (D. Light, 2011)
- The importance today of speculative acquisitions and financialization
- DNDi alternative model



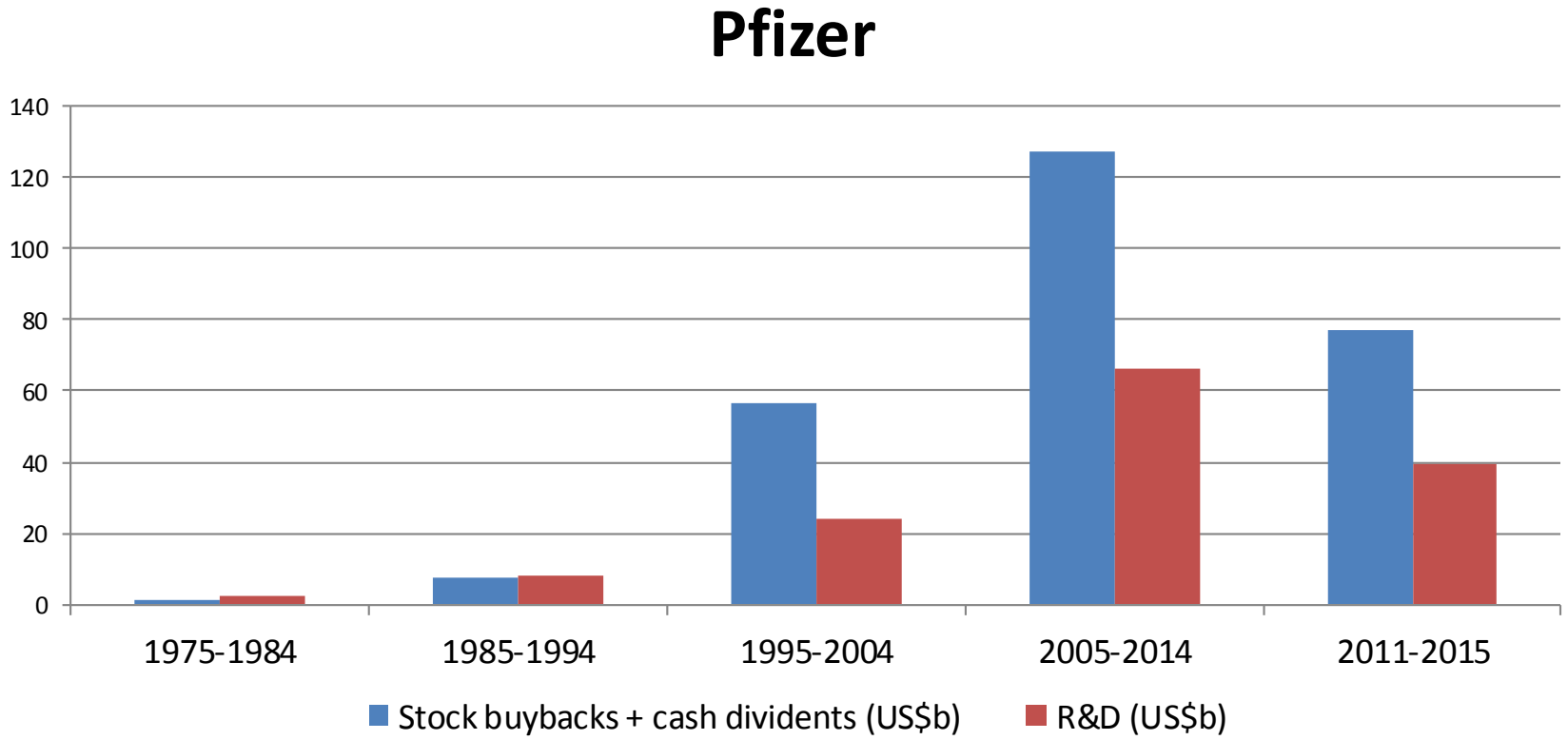
Roy and King, 2016

Cost of R&D vs. financialization



Lazonick *et al.*, 2016

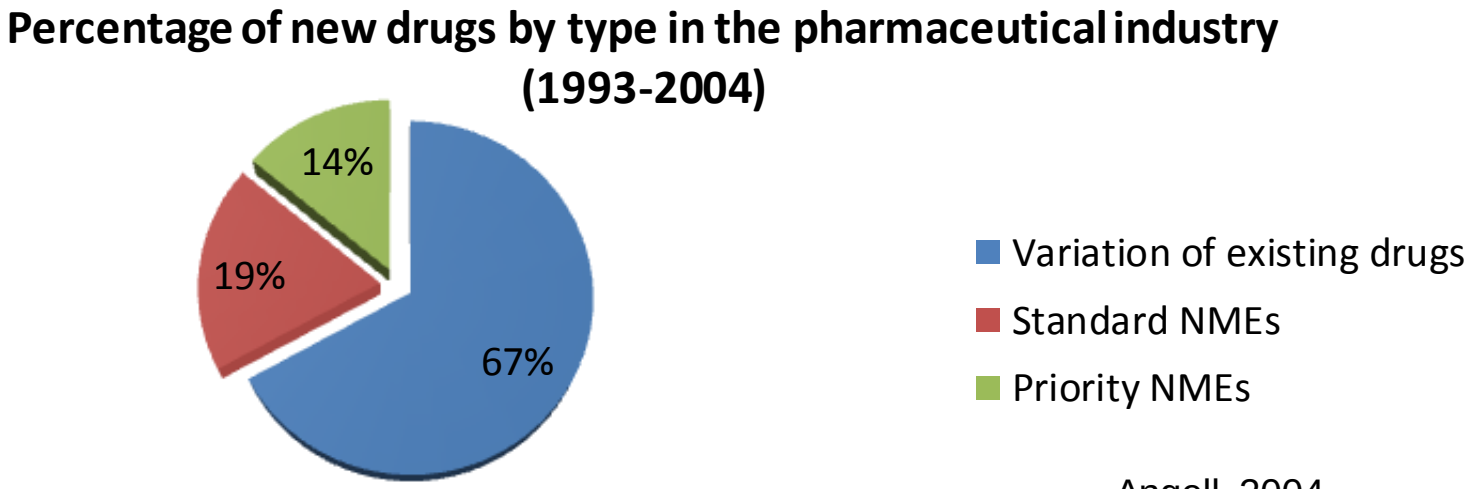
Cost of R&D vs. financialization



Lazonick *et al.*, 2016

Cost of R&D – Public involvement

- New Molecular Entities come mainly from public research: 75% between 1993 and 2014 (Angell 2014), private sector focused mainly on me-too.



Angell, 2004

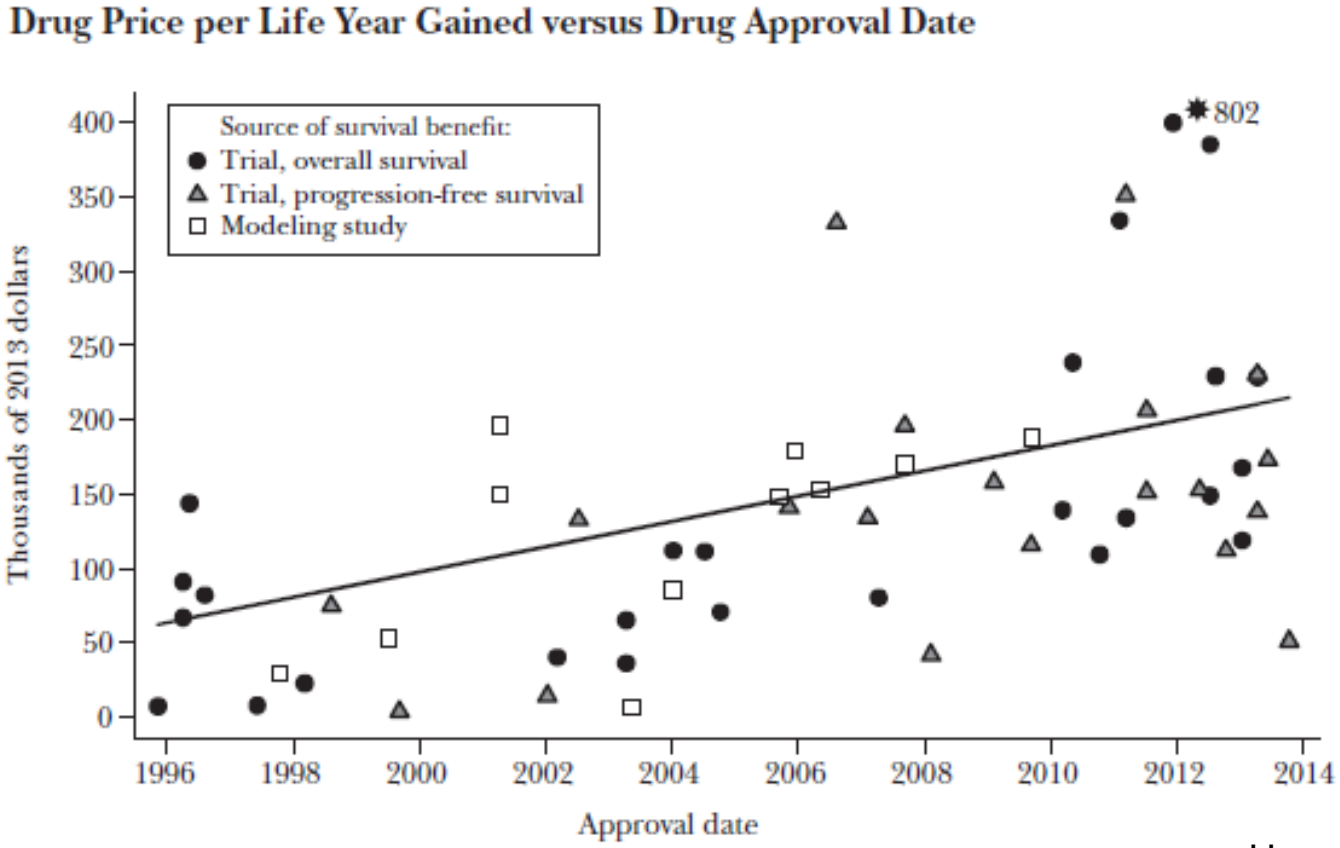
Cost of R&D – Public involvement

- British Medical Research Council research led to the development monoclonal antibodies in the 70s.
- The US NIH budget for 2016: US$ 32.3b, distributes 50,000 grants and employs 325,000 researchers.

Value

- *This drug is worth the charged price*
- Cost to society if the disease was not treated or treated by the second best therapy
- Is this argument valid? Mostly not

Value



Howard *et. Al.*, 2015

Power

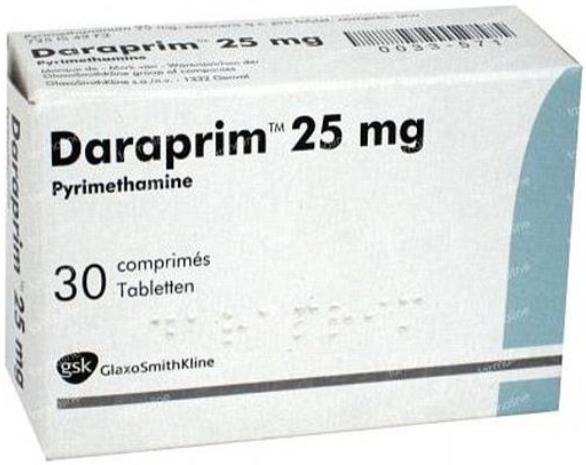
- *My patent protection allows me to charge a lot*
- What is the market willing to pay?
- Is this argument valid? Certainly yes

Power

BUSINESS DAY

Drug Goes From $13.50 a Tablet to $750, Overnight

By ANDREW POLLACK SEPT. 20, 2015



Power

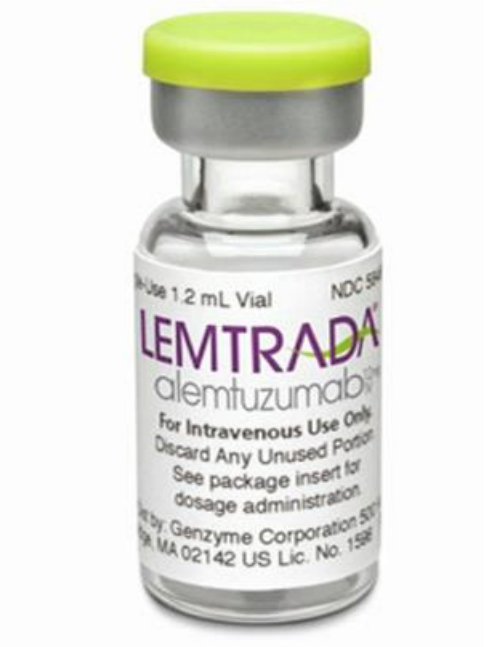
Lifestyle › Health & Families › Health News

Exclusive: MS drug 'rebranded' – at up to 20 times the price

Pharmaceutical giant withdraws existing treatment to boost profits

Jeremy Laurance | @jeremylaurance | Saturday 13 October 2012 | 0 comments

12 shares



Prizes

- *High prices are the consequence of the need to reward investors*
- Incentive-based pricing
- Investment (by venture capital) on R&D is highly sensitive to drug price
- Is this argument valid? Certainly yes

A Pyrrhic victory?

- The question we face: how to ensure that new therapeutic progresses are not a Pyrrhic victory?

Options for the future

- Enhance collaboration
  - PPRI network, CAPR, Fair Pricing initiative (WHO)
- Develop strategic procurement
  - Joint negotiations (BeNeLux), WHO conference (Sept.16)
- Discuss relevance of some patent protection features
  - Data exclusivity periods ? Orphan designations? Moral Obligation? Shorter patent protection for me-too medicines?

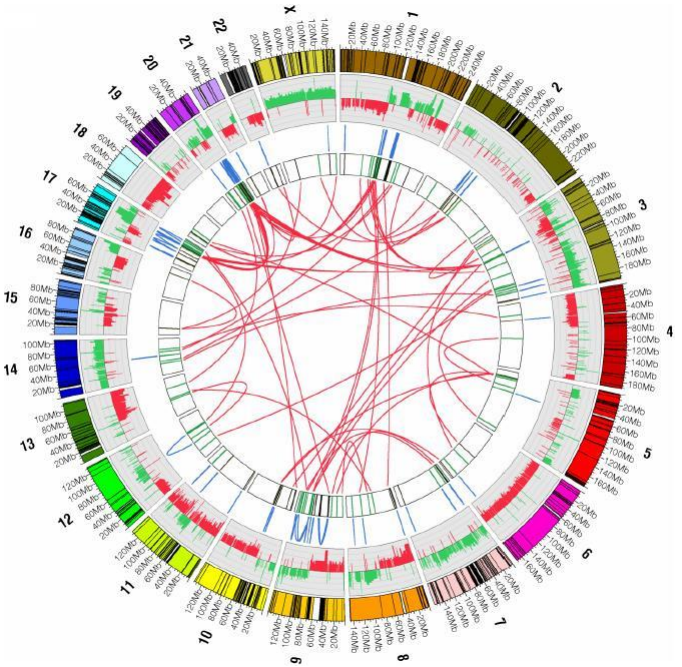
Options for the future

- Reduce influence of finance in the pharma business model:
  - Ban stock repurchases in the pharmaceutical sector.
  - Link executive compensation to launching new innovative drugs.
- De-linkage
  - Antibiotics ?

Options for the future?

?

Precision medicine → Precision pricing



To be continued…

Council of the EU

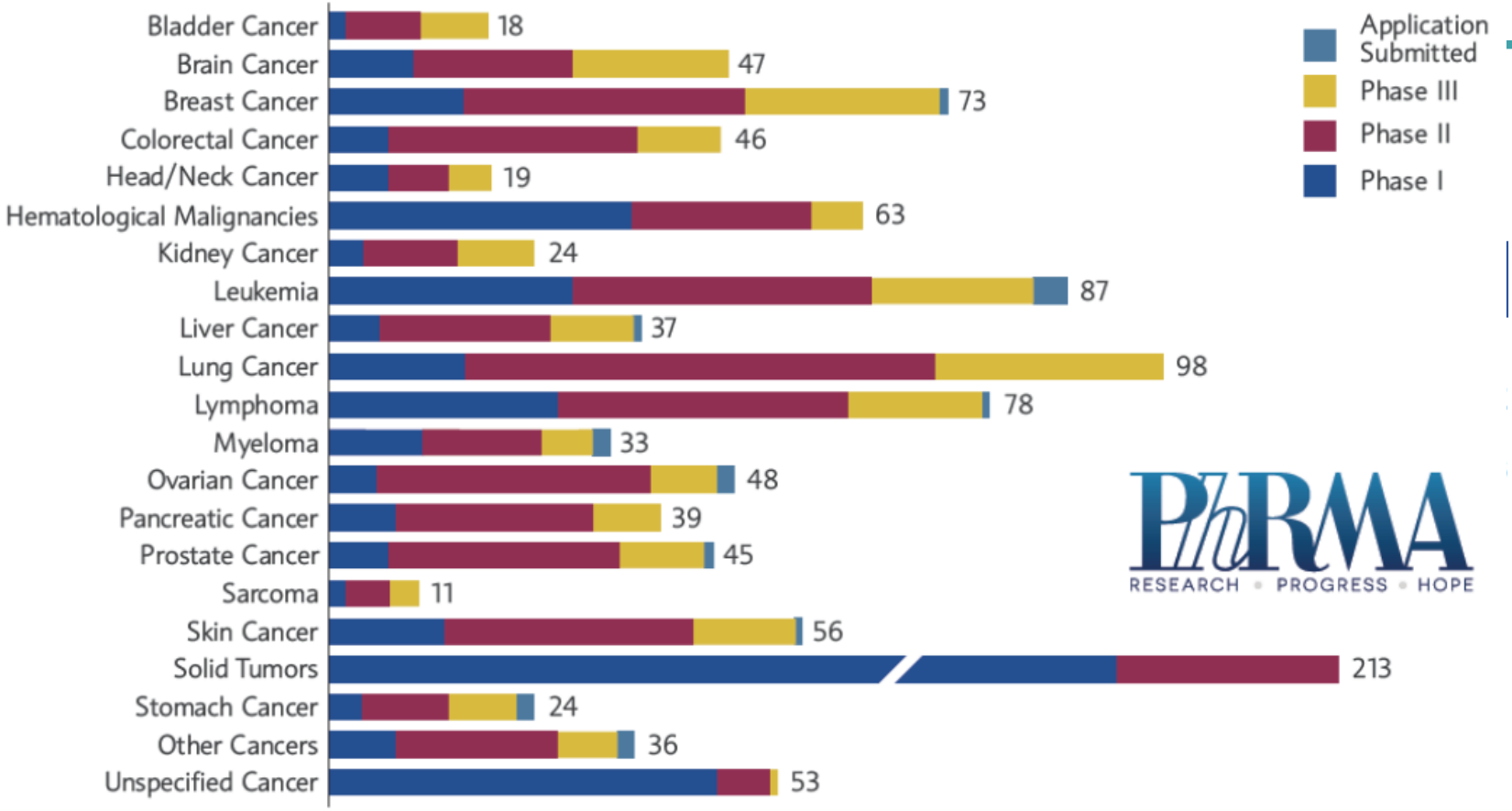
PRESS
EN

PRESS RELEASE
350/16
17/06/2016

Council conclusions on strengthening the balance in the pharmaceutical systems in the EU and its Member States

Medicines in Development By Disease and Phase

Some medicines are listed in more than one category.



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If you want to know more

- Please consult our website: http://www.euro.who.int/en/health-topics/Health-systems/health-technologies-and-medicines
- To read: http://www.euro.who.int/en/health-topics/Health-systems/medicines/publications2/2015/access-to-new-medicines-in-europe-technical-review-of-policy-initiatives-and-opportunities-for-collaboration-and-research
- dedetg@who.int

Thank you… Questions…