



Addressing Economic Distortions in the Indo-Pacific: The Role of Industrial Subsidies and State-owned Enterprises

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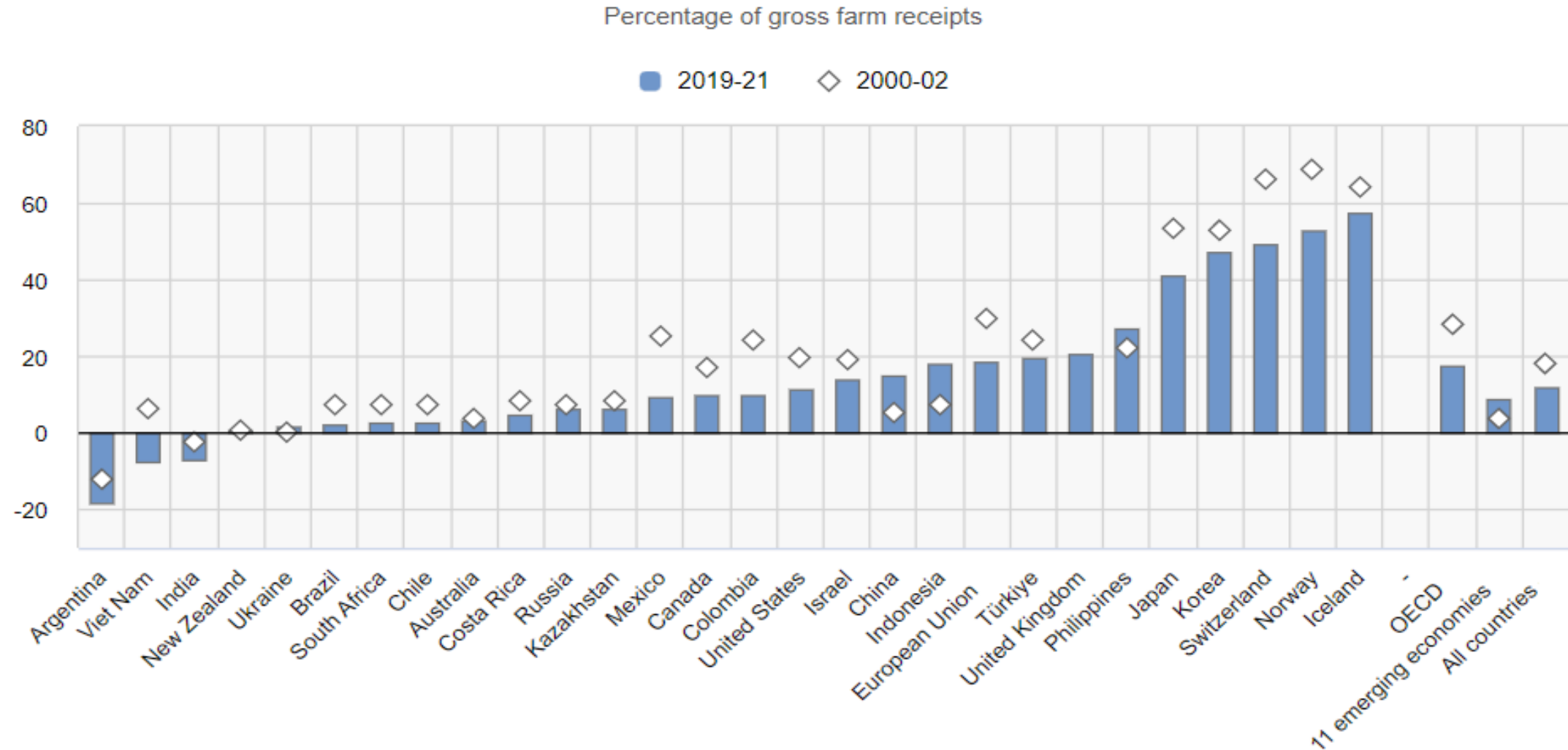
Why do we care?

- Level playing field and distortions to competition (beggar-thy-neighbour)
- Encourages investment in capacity that not otherwise built, or keeps uneconomic capacity alive (with effects on prices, jobs)
- Impacts on important social and economic goals (governance, environment)
- Undermines faith in global markets and a fair global economy
- Support is a growth industry.....and is hard to reform



Government support is hard to reform

Producer Support Estimates by country, percentage of gross farm receipts, 2000-02 and 2019-21





The landscape is changing for government support

Lots of reasons for a bigger role for the state

(i) **Significant – essential -- support in COVID-19.**

- Design matters – how you go in affects how/if you come out
- How you go out also matters – loan guarantees, tradable sectors

(ii) **Resilient supply chains**

- Role of state increasing, especially on essential goods
- Incentives to companies for diversification

(iii) **National security/geopolitics**

- Tech, dual use and concentration concerns
- Countries with different economic (and political) systems

(iv) **Green and digital transformations**

- Public investments needed – however, need to target market failures

What's a good subsidy?



UNDERSTANDING GOVERNMENT SUPPORT



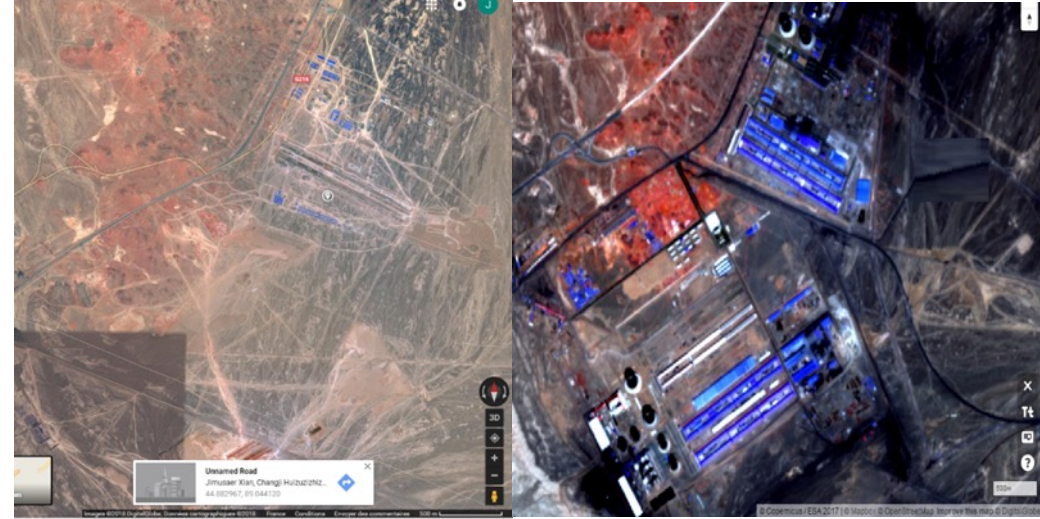
Government support takes many forms

		Statutory or Formal Incidence (to whom and what a transfer is first given)						
		A: Output returns	B: Enterprise income	C: Cost of intermediate inputs	Costs of Value-Adding Factors			
					D: Labour	E: Land and natural resources	F: Capital	G: Knowledge
Transfer Mechanism (how a transfer is created)	1: Direct transfer of funds	Output bounty or deficiency payment	Operating grant	Input-price subsidy	Wage subsidy	Capital grant linked to acquisition of land	Grant tied to the acquisition of assets	Government R&D
	2: Tax revenue foregone	Production tax credit	Reduced rate of income tax	Reduction in excise tax on input	Reduction in social charges (payroll taxes)	Property-tax reduction or exemption	Investment tax credit	Tax credit for private R&D
	3: Other government revenue foregone		Waiving of administrative fees or charges	Under-pricing of a government good or service		Under-pricing of access to government land or natural resources	Debt forgiveness or restructuring; soft loan from the government	Government transfer of intellectual property rights
	4: Transfer of risk to government	Government buffer stock	Third-party liability limit for producers		Assumption of occupational health and accident liabilities	Credit guarantee linked to acquisition of land	Loan guarantee; non-market debt-equity swaps and equity injections	
	5: Induced transfers	Import tariff or export subsidy; LCRs	Monopoly concession	Monopsony concession; export restriction	Wage control	Land-use control	Credit control (sector-specific); non-market M&As	Deviations from standard IPR rules



Understanding support in industrial sectors is challenging

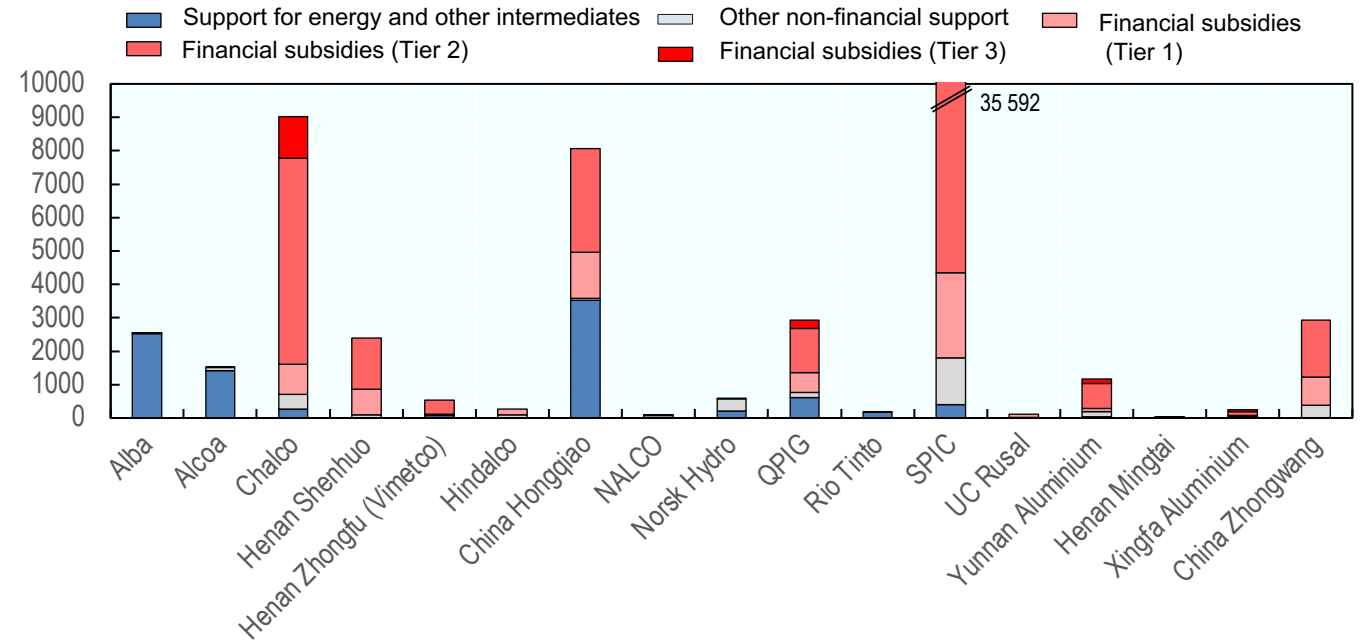
- **Work to date**
 - Commodity (aluminium)
 - High-tech sector (semiconductors)
 - Below market finance (horizontal)
 - Ongoing work on rolling stock, energy inputs, SOEs
- To assess government support in industrial sectors, we looked at **individual firms**:
 - Necessary given lack of policy transparency
 - Enables greater granularity (e.g., of subnational measures)
 - Enables identification of support beyond traditional forms (e.g., below market finance)





What did we learn? Aluminium

- **Support upstream** can have sizable **effects downstream**.
 - Need to take a **value chain approach**
- Support mostly takes the form of **energy subsidies** and **below-market financing**.
 - Below-market financing is hard to measure but even conservative estimates suggest it is significant. (USD 7-56 billion)
 - Aluminium multinationals obtain support in the different countries in which they operate, but large SOEs get most support from their home countries.
- There **is strong involvement of the state** in the aluminium value chain, and SOEs are both recipients and providers of support:
 - SOEs account for almost half of all smelting capacity
 - Cheap finance (debt) is often delivered through state-owned financial institutions
 - Issues for transparency

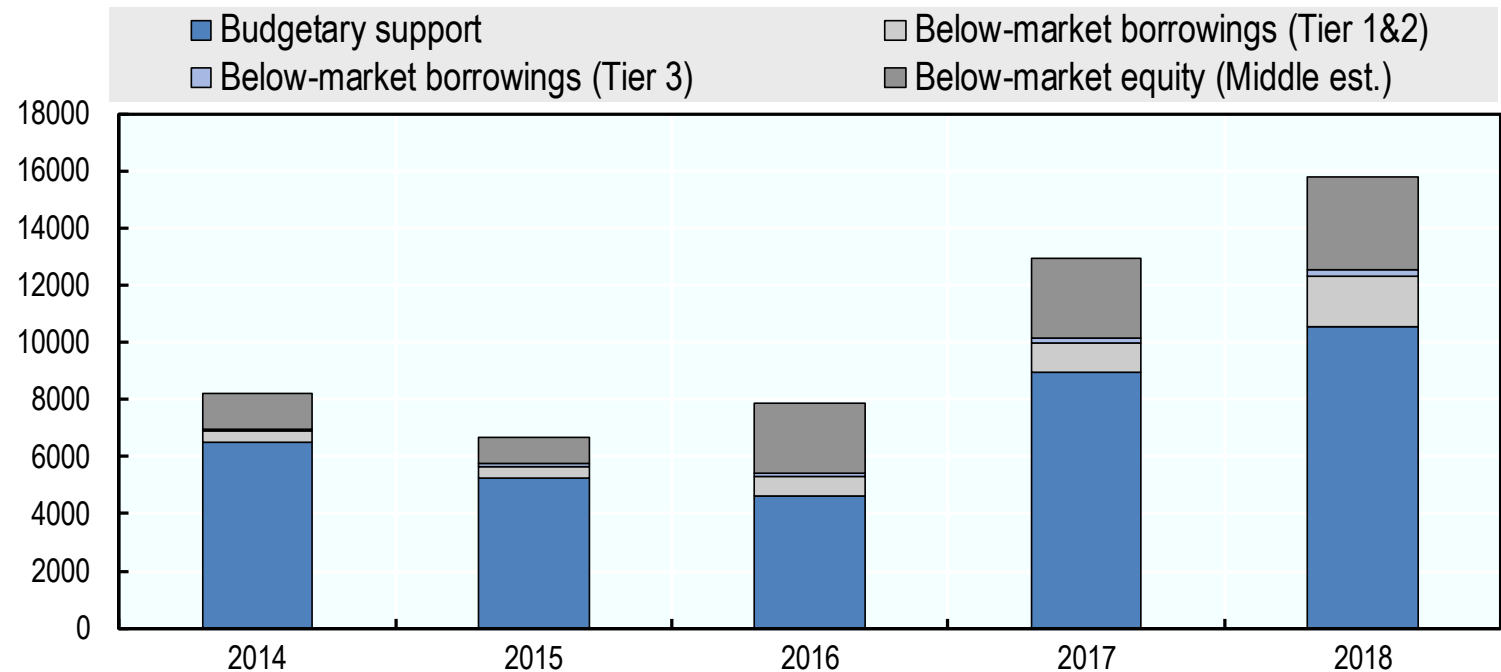




What did we learn? Semiconductors

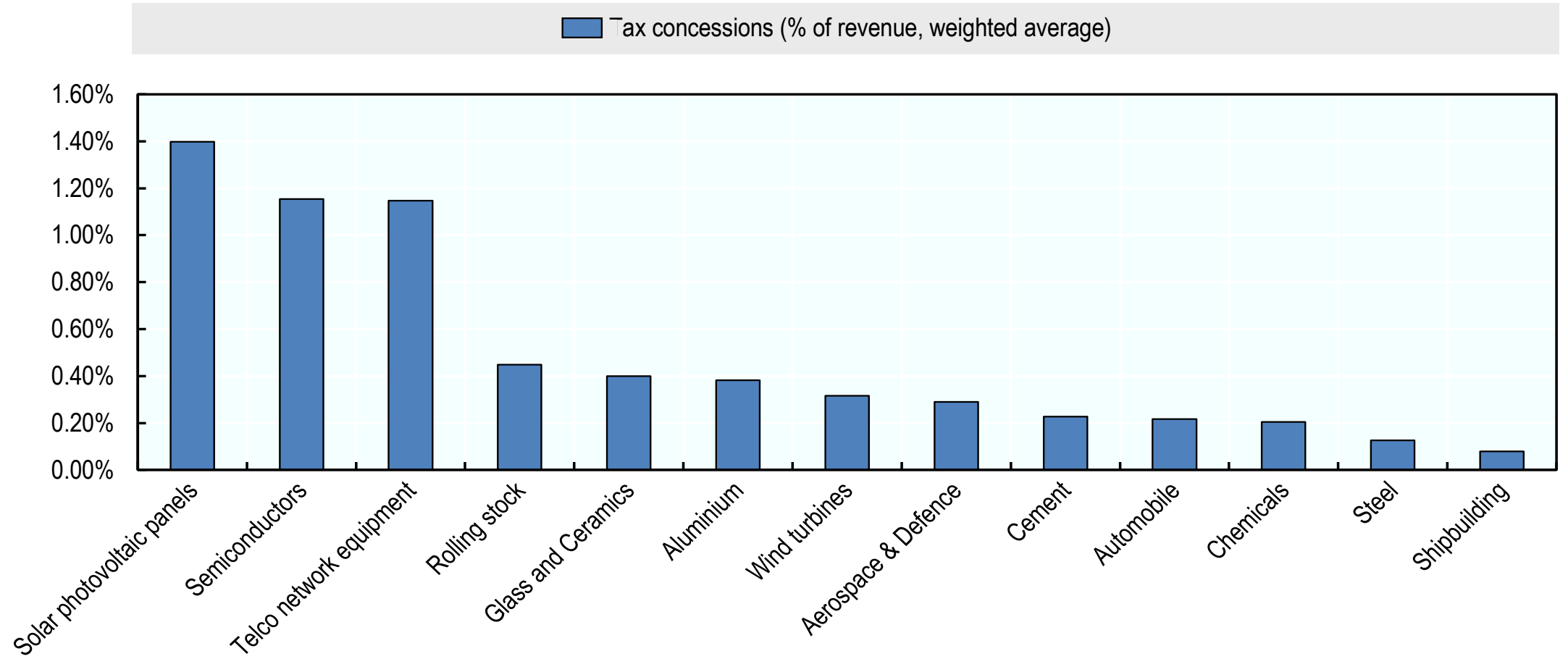
- R&D subsidies are significant
 - But do they work in high-tech sectors?
- Below market finance significant: loans (debt), but also equity
 - Hard to measure equity
 - Not just one off benefit
- How to treat government ownership in firms?
 - SOEs vs government invested firms

21 Semiconductor Firms received USD 50B over 2014-18





Tax concessions are relatively larger in tech-oriented sectors and solar panels



Note: Data are expressed relative to the sales revenue of the firms covered in the study over the period 2005-19.

Source: OECD



What did we learn? Below market finance

Support measures:

- **Below-market finance**
- Grants
- Tax concessions
- Below-market inputs
- Below-market energy
- ...

Below-market borrowings

Below-market equity

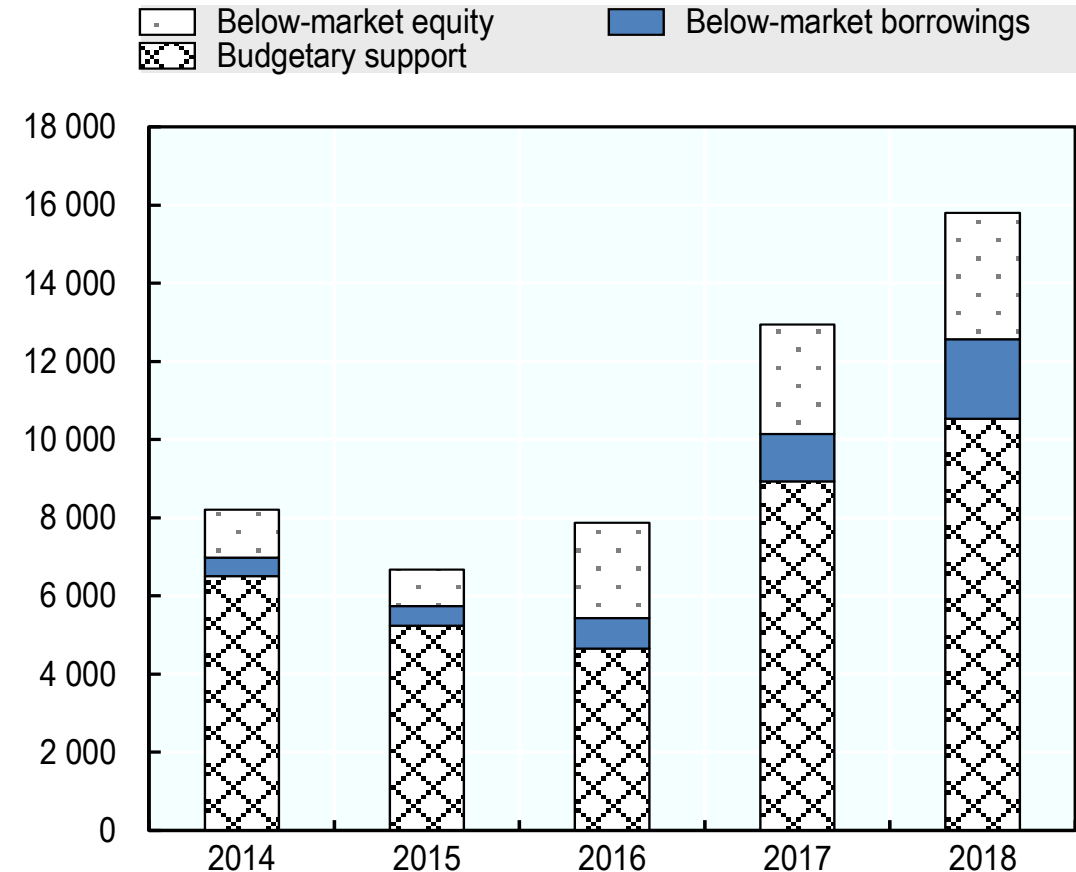
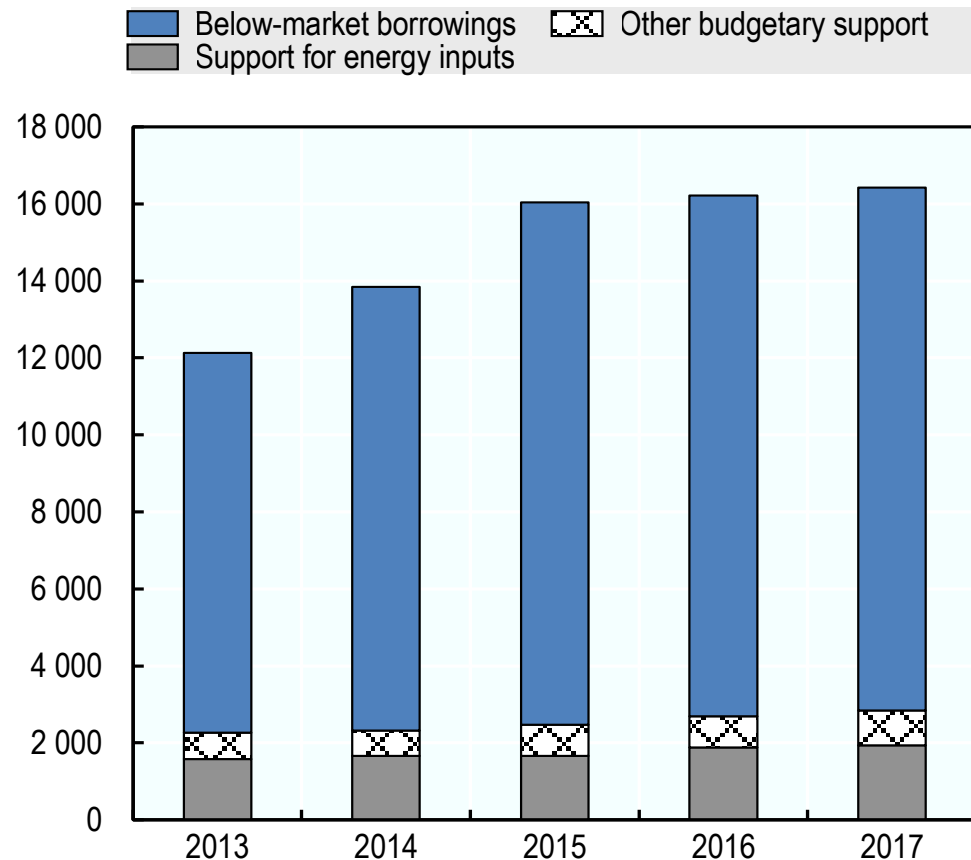
Below-market equity infusion

Below-market equity returns



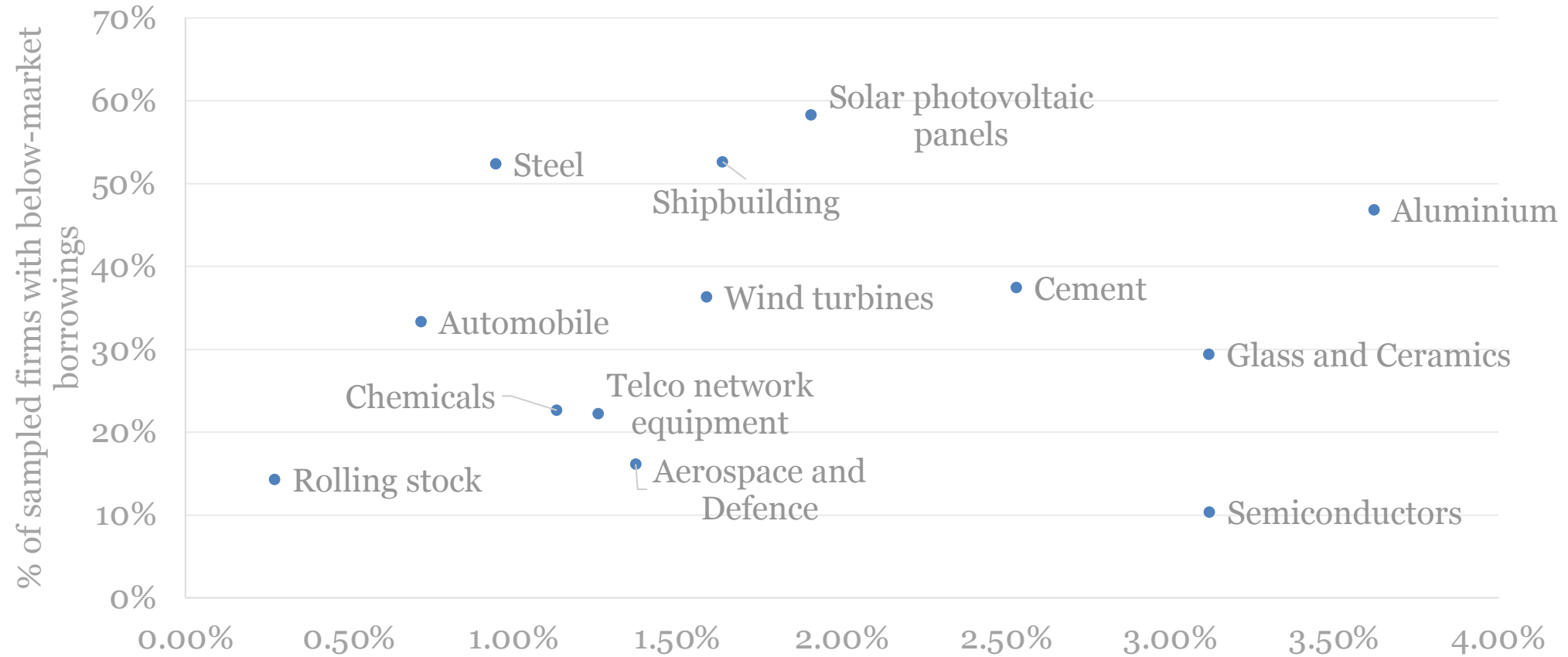
Below-market finance is a large source of support in aluminium (left) and semiconductors (right)

Government support by year and type of support, USD millions, current





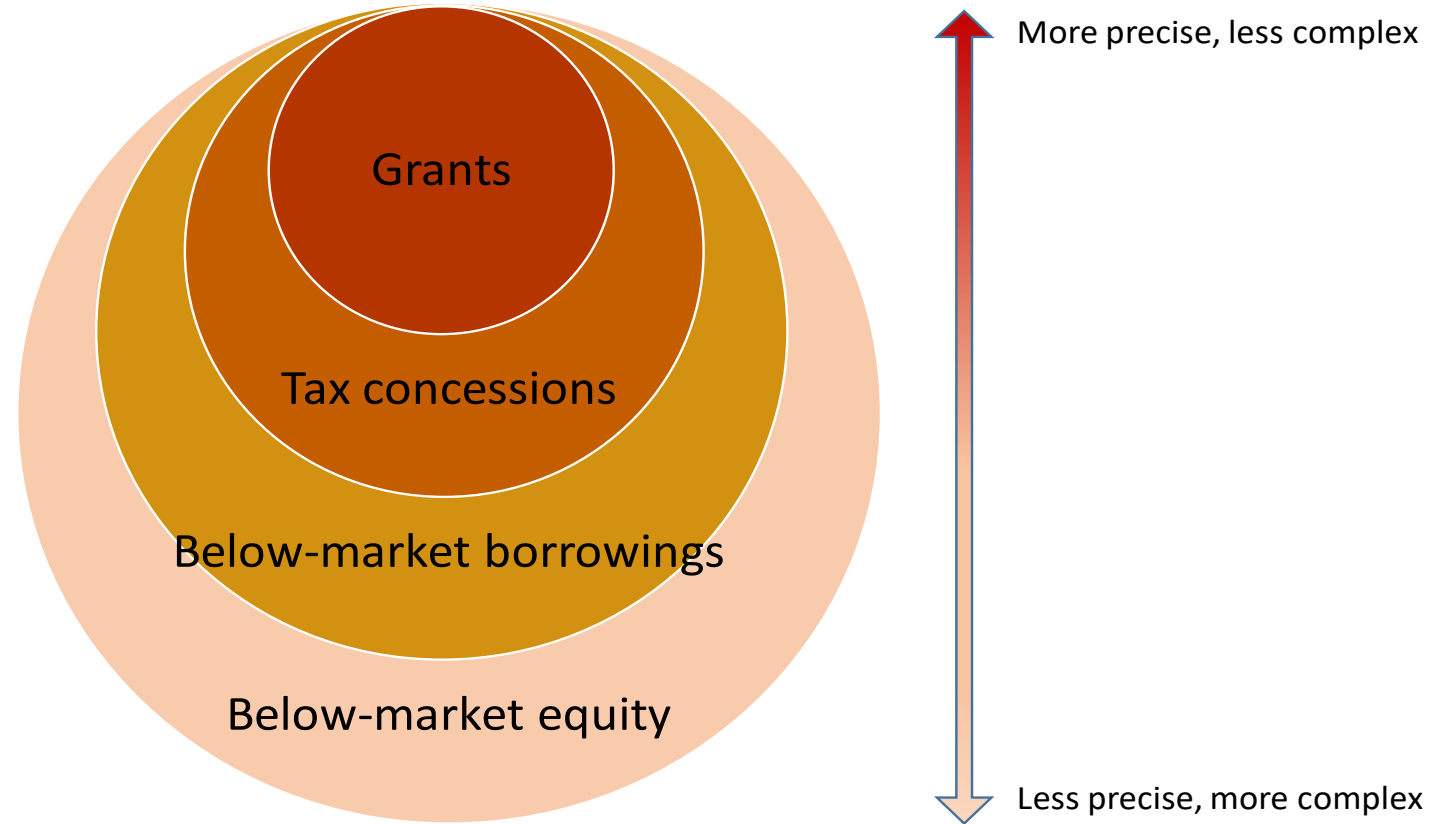
Below-market borrowings appear especially marked in industries with excess capacity



Below-market borrowings in % of revenue, sectoral average of benefitting firms only



Support estimates differ in precision and complexity





Understanding impacts is a further challenge

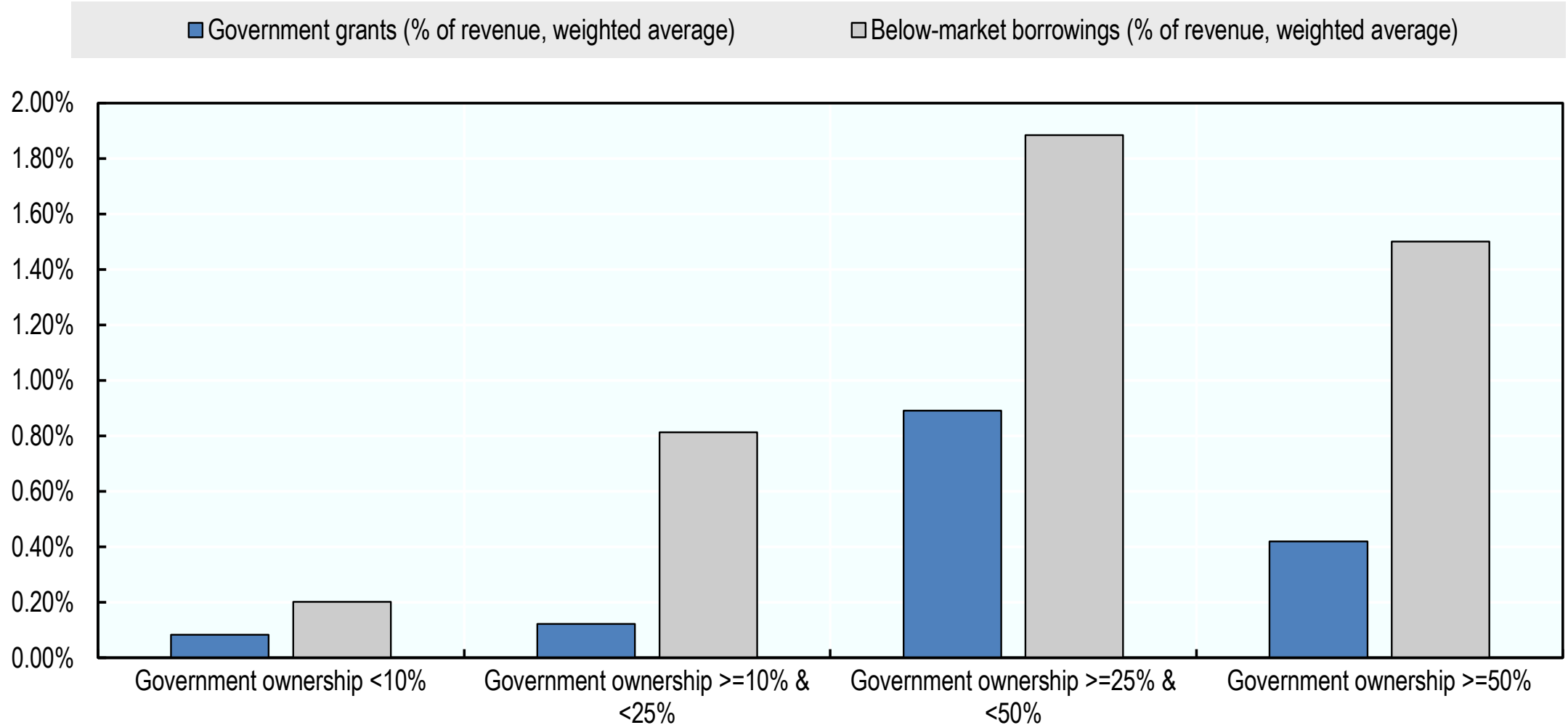
- Support builds along value chains
 - Attribution of benefit (downstream and upstream)
- Interacts with other government policies
 - E.g., export restrictions lower input costs
- Interactions among different forms of government support
 - Cheap inputs enhances profitability, masks below market equity or loans
- Technically challenging
 - Market benchmarks
 - Causality vs correlation



THE ROLE OF THE STATE: SOE AND SE



Government-invested firms tend to benefit more from support



Note: Data are expressed relative to the sales revenue of the firms covered in the study over the period 2005-19. Source: OECD (2021), “Measuring distortions in international markets: Below-market finance”, *OECD Trade Policy Papers*, No. 247, OECD Publishing, Paris.



Governments own a large share of assets in certain sectors

Sector	Total book value of assets in 2018 (USDmn)	Percentage of assets held by governments
Aerospace and Defence -- AERO	860,335	28.9%
Aluminium -- ALUM	446,126	55.5%
Automobile -- AUTO	3,234,765	13.4%
Cement -- CEMT	393,035	15.2%
Chemicals -- CHEM	1,354,185	19.9%
Glass and Ceramics -- GLAS	140,675	0.4%
Rolling stock -- TRAN	140,527	20.4%
Semiconductors -- SEMI	961,208	7.0%
Shipbuilding -- SHIP	208,166	67.4%
Solar photovoltaic panels -- SOLA	44,225	5.5%
Steel -- STEE	823,348	44.0%
Telecommunications network equipment -- TELC	374,598	4.1%
Wind turbines -- WIND	82,376	6.1%

Source: OECD below market finance. Sample comprises more than 300 large manufacturing firms. Table shows only the assets of the firms covered by the sample.



State ownership per se is not necessarily a problem

- **Transparency** is key, but also **oversight**
 - Parliamentary oversight
 - Public accountability, checks & balances
- And adherence to **good governance practices**
 - Regulatory requirement for competitive neutrality
 - Disclosure and auditing rules
 - Clear separation when involved in commercial activities
 - State support is different from public service obligations



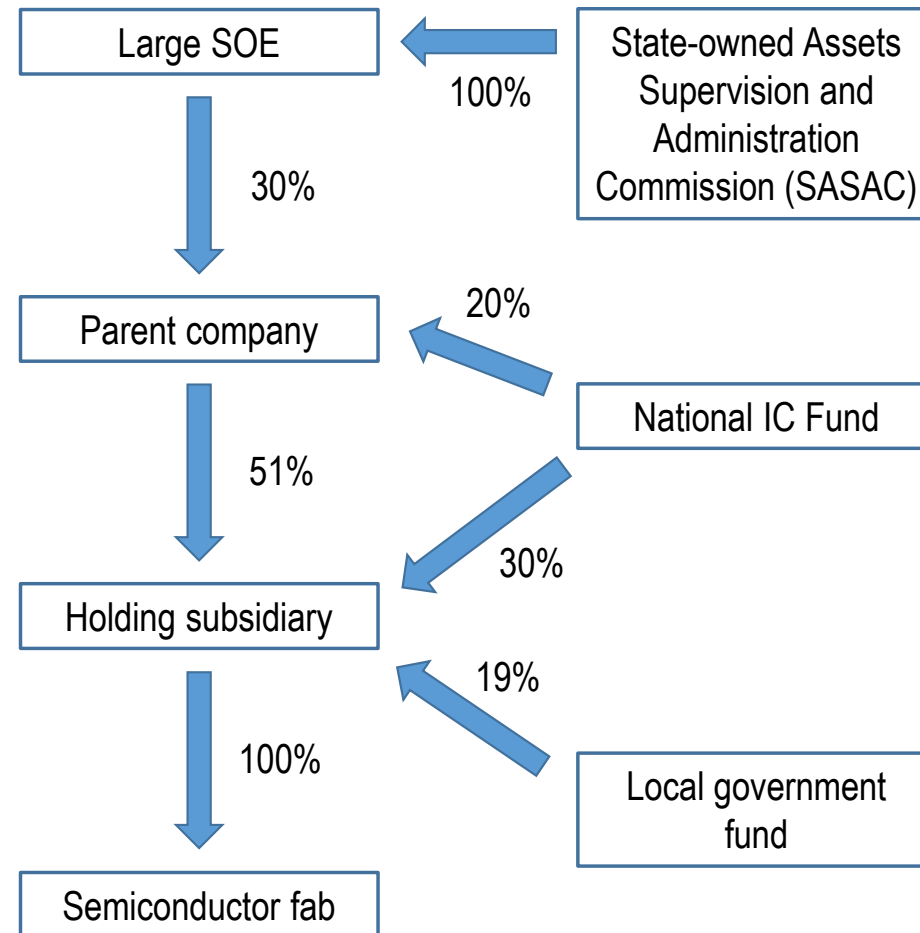
But state ownership can be the channels for support

- Government invested firms are both important recipients and providers of support
- In both cases, starts below the “majority ownership” concept of an SOE
- Different definitions of SOEs at national level
 - Often 50% or majority ownership, but also other factors
 - Size, but also golden shares, Board appointees
 - But also more difficult aspects to capture like influence
- We use the concept of “state enterprise”



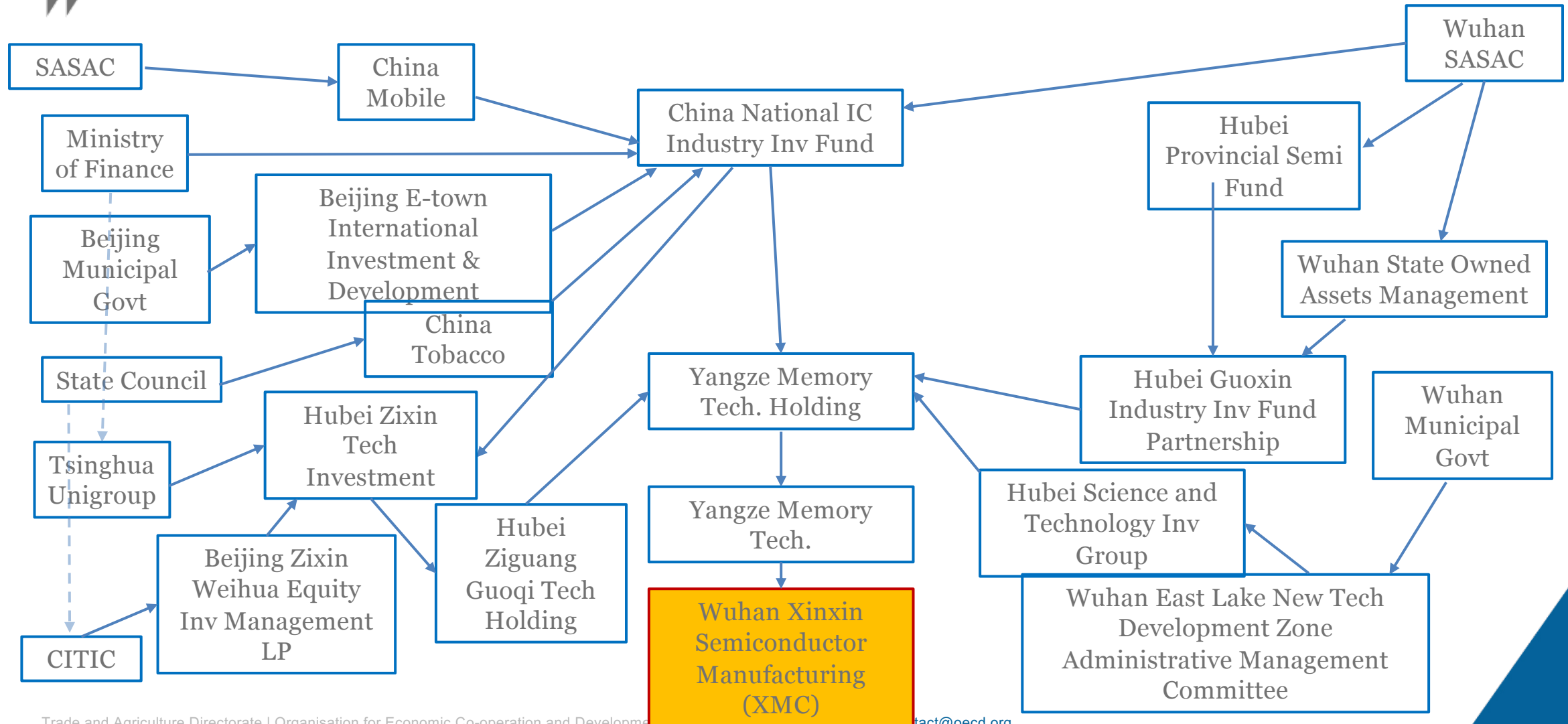
An important challenge is knowing where the state is

Stylised ownership structure of new semiconductor fabs in China, % of shares



Note: Fabs' is the common denomination for semiconductor manufacturing facilities or fabrication plants. Source: OECD (2019).

An important challenge is knowing where the state is





Why do we need to know where the state is?

- **Lack of transparency masks government support** by giving appearance of regular commercial transactions
- State investment is the plumbing through which a range of support can flow
 - Grants, loans, equity
 - But also less direct benefits (information, competitors self-censor)
- Other reasons, e.g.,
 - National security - FDI screening, M&A
 - Market distortions (e.g., under-pricing in internationally competitive tenders, M&A bids)
 - Economic coercion (unwritten instructions)
 - Forced tech transfer



WHAT CAN WE DO ABOUT GOVERNMENT SUPPORT?

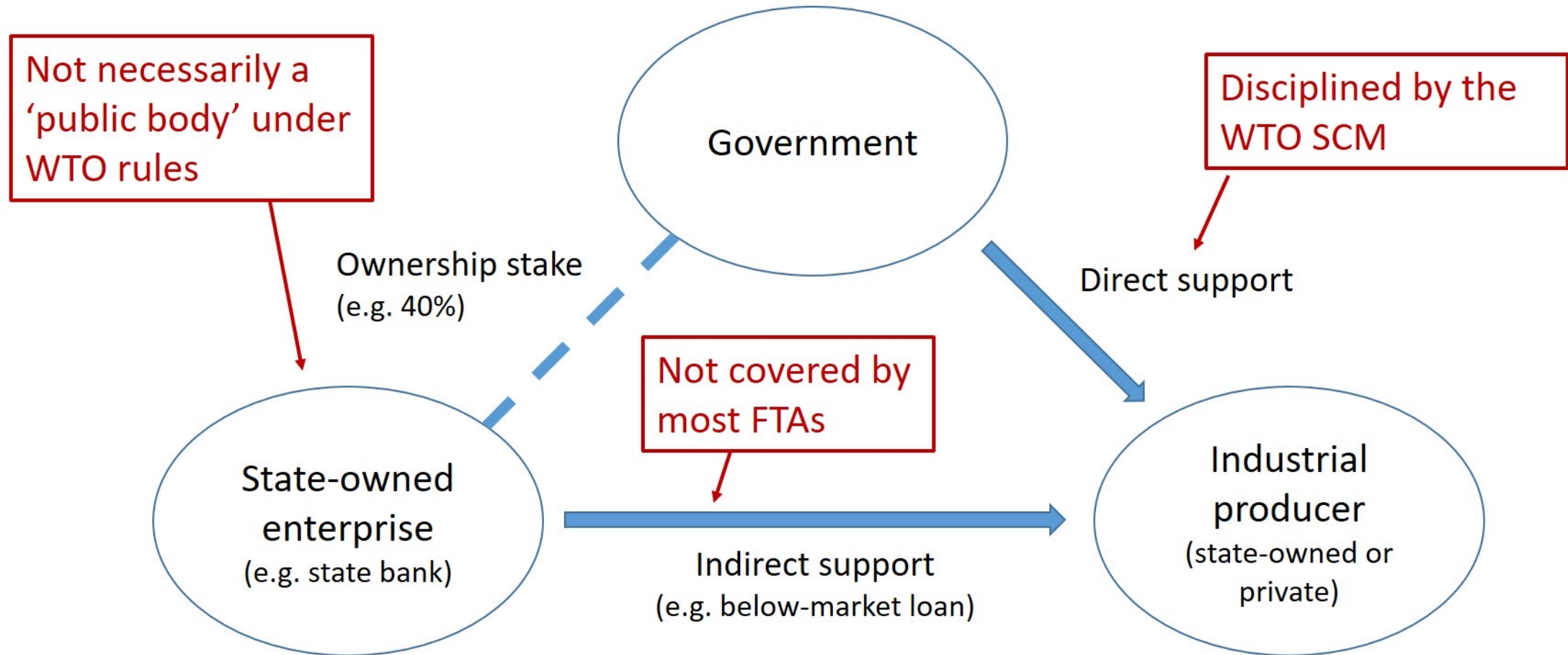


Government support is best addressed multilaterally

- Reform of government support requires 4 interconnected things
 - **Transparency** (what's going on)
 - **Predictability** (lock in, baseline)
 - **Reduction** (starting with the most egregious)
 - **Prevention** (tomorrow's subsidisers in tomorrow's sectors)



WTO: fix the gaps in the rules...and make them usable





Transparency is the key first step

- **WTO notifications** – how to improve?
 - Link to wider transparency discussions
 - Role for WTO Secretariat? Other IOs?
- **Mind the gaps**
 - Government ownership of companies: need more information on where the state is
 - Below market finance – agreement, benchmarks
- **Leverage non-government sources of information**
 - Accounting standards
 - Company disclosure for listing or procurement bids



All multilateralism is local

- Need to **make the domestic case for global policy reform**
- **Government support can be self-defeating**
 - International competition
 - Subnational competition
 - Impacts on productivity
 - Negative correlation to cheap loans
- **Is support achieving its claimed objectives – and at what cost?**
 - Who pays, who benefits?
- **Opportunity costs for scarce public resources**
 - Investments in the public interest (education, infrastructure – including digital, health systems)

Thank you – and contact us

We look forward to hearing from you!



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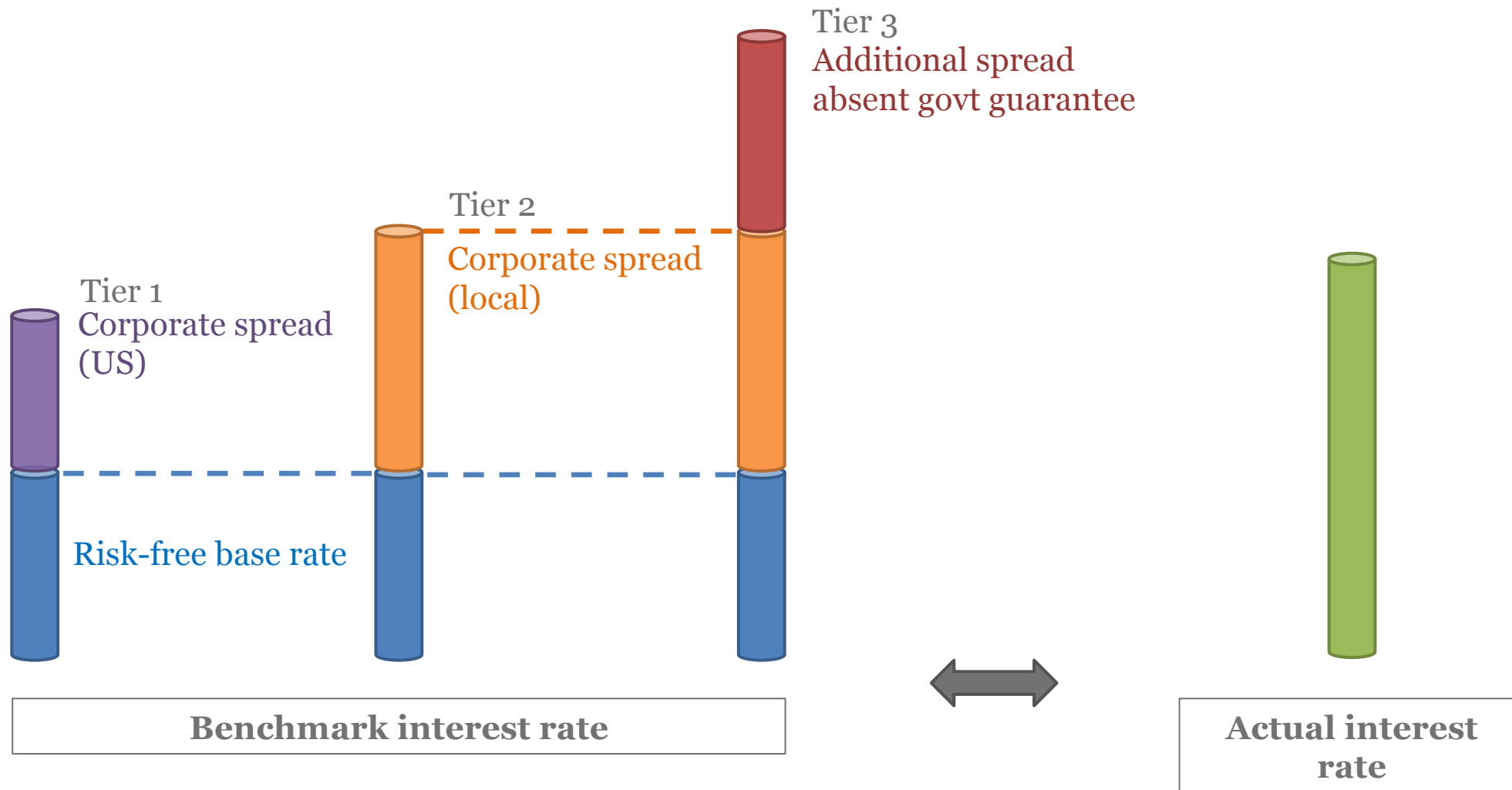
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Estimating below-market borrowings





Estimating below-market equity returns

Market benchmark return
= **required rate of return** x
assets

