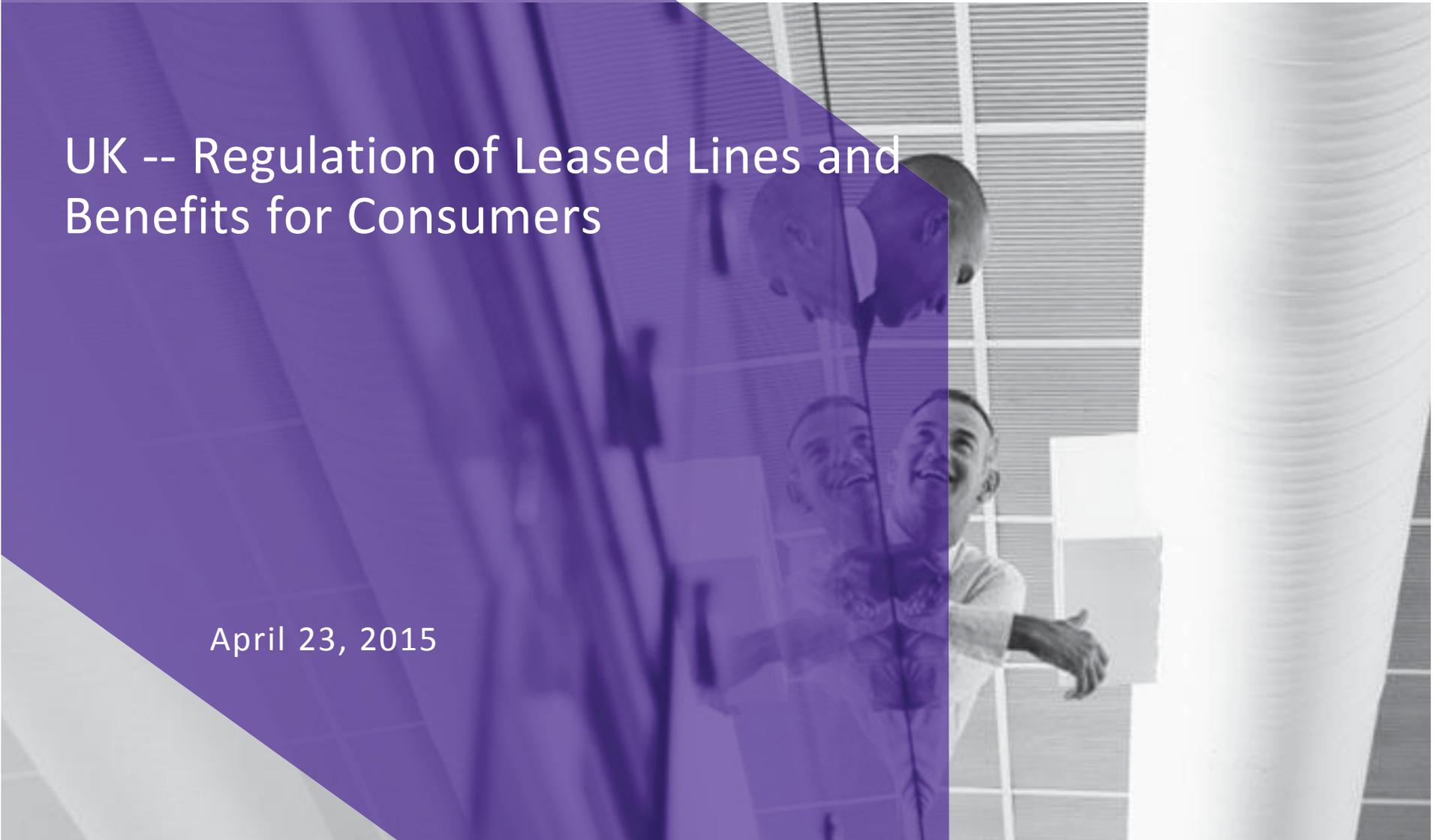




UK -- Regulation of Leased Lines and Benefits for Consumers

April 23, 2015



UK REGULATION OF LEASED LINES 2003- present



UK regulator Ofcom and other regulators of EU member states run market reviews of leased line (including special access) services every three years. Ofcom is conducting its fourth review which it will complete in 2016.

Date of Ofcom Market Review	Regulation of TDM Leased Line Access		Regulation of Ethernet Leased Line Access	Regulation of Multiple Interface / Optical
	Retail	Wholesale		
2003	Yes	Yes, up to 622Mb	No	No
2007	Yes, < 2Mb/s	Yes, up to 155Mb	Yes, ≤ 1Gb/s	No
2013	Yes, < 2Mb/s	Yes, up to 155Mb	Yes, ≤ 1Gb/s	Yes, no bandwidth limit
2016	pending	pending	Yes, ≤ 1Gb/s	Yes, no bandwidth limit

UK Regulation of Leased Line Access 2003- present



Date of Ofcom Market Review	TDM Leased Line Access Price Controls		Ethernet Leased Line Access Price Controls	Multiple Interface / Optical Price Controls
	Retail	Wholesale		
2003	Cost orientation	RPI – 4% low bandwidth RPI – 6.5	No	No
2007	Voluntary price cap increase limited to inflation	RPI – 3.25%	RPI – 7%	No
2013	RPI + 2.5% (analogue)	RPI + 2.5%	RPI – 11.5% RPI - RPI (WECLA)	Cost accounting

Price control shown as inflation (RPI) and X reduction per annum. Note there are sub-baskets as well which limit price changes for particular services. WECLA is a deregulated zone consisting of West, East and Central London.

UK REGULATION OF LEASED LINES



▪Ofcom's Methodology for Reviewing the Leased Lines Market

–Ofcom defines the retail product market by considering whether a product is substitutable by the consumer considering the product's pricing, characteristics and intended use. Using this retail product information, Ofcom derives the wholesale product markets.

–Ofcom collects extensive supply and demand data much like the FCC has just done and uses it to analyze competitive conditions in 10k UK postal sectors (which are like US zipcodes but smaller).

UK REGULATION OF LEASED LINES

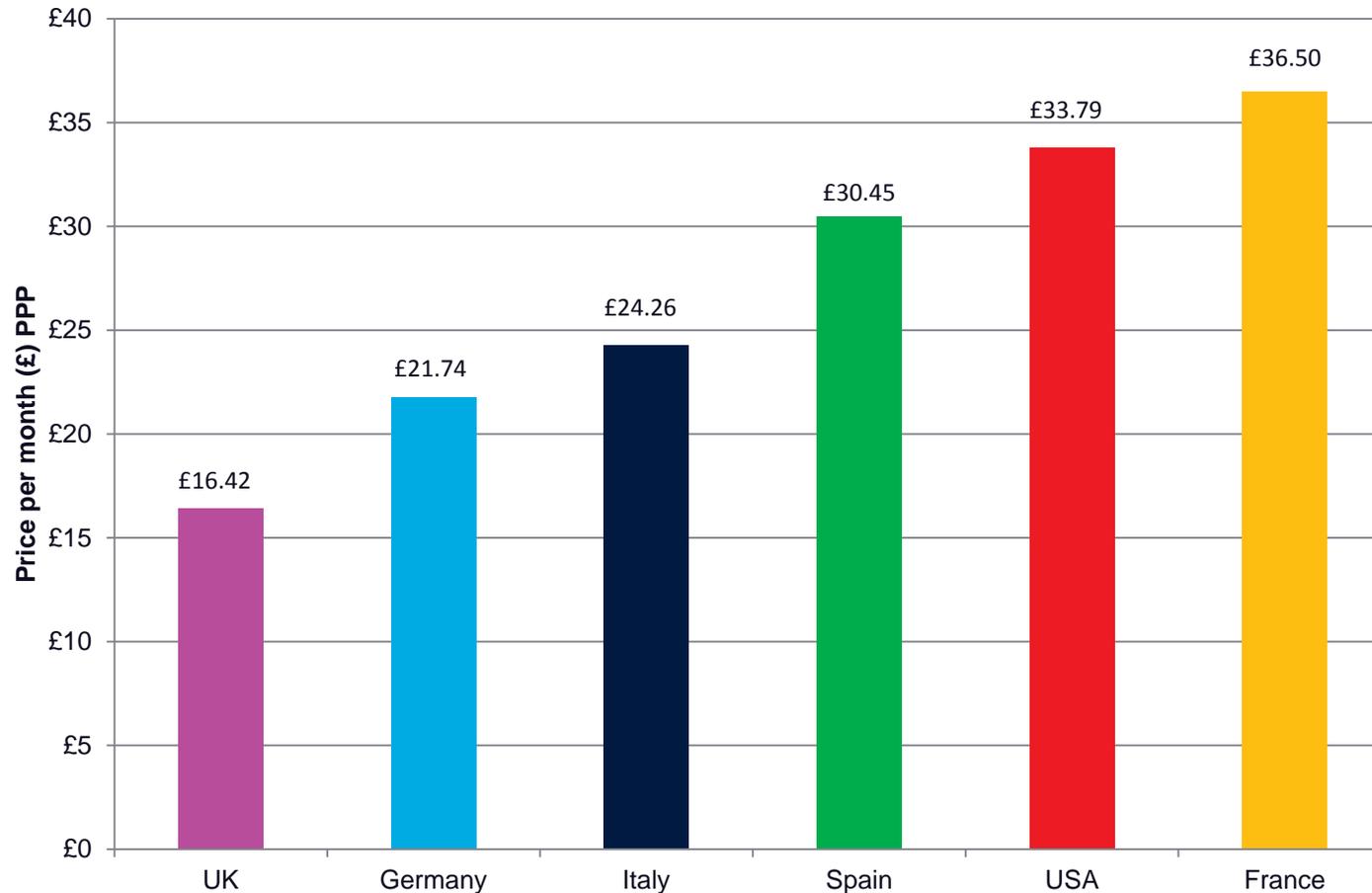


- Ofcom maps on a postal sector basis the network reach of infrastructure-owning competitors (i.e. business sites that are 200m from a network ingress ‘flex point’). Ofcom also considers incumbent’s pricing policies and service shares, the degree of interconnection amongst competitors and contiguity to determine geographic market boundaries.
- Ofcom then determines whether the incumbent has significant market power in the relevant market. Using this analysis, Ofcom determines the product and geographic markets in which incumbents are dominant.
- It then applies remedies which include obligations to supply wholesale services to other operators, not to unduly discriminate against them, to publish prices and reference offers, price controls, accounting separation and cost-accounting.

Effective Regulation → Low UK Broadband Prices



Ofcom's regular review of the wholesale access market and imposition of remedies where dominance led to competition and innovation to the benefit of UK consumers. UK has lowest superfast broadband prices (24 Mbps & up).



Source: International Communications Market, December 2014, Ofcom

Notes: Comparative single service 'lowest available' fixed-line broadband pricing monthly prices (excluding telephone line rental); PPP adjusted.

Effective Regulation → Low UK Ethernet Prices



Effective Regulation → Low UK Wholesale Ethernet Prices on Open and Transparent Terms and Conditions

- A UK competitive provider (CP) can purchase a 100 Mbps Ethernet link from BT openreach to connect its POP to openreach’s facilities in the same exchange for as little as £254/month or \$382/month (\$363 PPP adjusted). The terms and conditions are open and transparent – for example, unlike the case in the US, CPs do not have to meet a percentage of previous spend to obtain reasonable discounts on supranormal prices, nor are purchases of dominant services tied to the purchase of competitive services. openreach’s prices are standard, open, transparent and available to all CPs.

Annual charges for nine 100 Mbps Ethernet Access Direct (EAD) links with 1Gbps handover (Year 1)	£ 39150	Year 1 includes nonrecurring connection charges plus year 1 total rentals
Annual charges for nine 100 Mbps links with 1Gbps handover (Years 2&3)	£ 43200	
Charges for 36 months	£ 82350	
Monthly charges	£ 2287.50	
Monthly charge per 100 Mbps EAD link	£ 254.17	

Above price based on CP purchasing nine 100 Mbps links aggregated over a 1 Gbps handover amortized over 3 years

Effective Regulation → Vibrant UK E-Commerce



UK has a highly developed e-commerce market with the value of business-to-consumer e-commerce at almost £2000 per person in 2013 which is significantly higher than in Australia or the US.

