



The Economics and Regulation of the Portuguese Retail Payment System

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Key Findings

Portugal has first-class retail payment system—one of the best in the EU

Success the result of investments and innovation from the 1990s and early 2000s

Existing and proposed price caps and mandated service requirements encourage cash use, distort prices for retail banking services, and shift costs from merchants to consumers. Retail payments operating at significant loss which will expand with further EU-mandated interchange fee reductions

Serious risk of reducing investment and innovation and turning Portuguese retail payments from first-class to second-class system.

Overview of presentation

The Portuguese retail payment system today, compared to other countries, and over time.

Existing and proposed price controls and mandated service requirements

Economic framework for evaluating the impact of price controls for retail payments

The likely impact of price controls in Portugal

Conclusions

Section 1

THE PORTUGUESE RETAIL PAYMENTS SYSTEM

Overview of the retail payments system

Stakeholder	What They Do
Retail Banks	Work with SIBS and card schemes to provide issuing services to consumers and acquiring services to merchants
SIBS FPS	Processes transactions and operates the gateways and clearing services between issuers and acquirers under several different schemes for multiple payment vehicles
SIBS Pagamentos	Runs the Multibanco debit card scheme and the MB SPOT value-added scheme for issuers and acquirers who serve consumers and merchants
UNICRE	Works with SIBS and the international card schemes to provide issuing and acquiring services
Card Schemes (MasterCard, Visa, and American Express)	Run internationally-marked cards schemes that issuers and acquirers can use in providing consumers and merchants card payment services in Portugal and internationally
Bank of Portugal	Issues and redeems cash and regulates banking and payments.

Portugal has one of world's most highly regarded payments systems

“Portugal has one of the most efficient payment systems in Europe,” according to the European Payments Cards Yearbook

Portugal was ranked in the 86th percentile among 162 countries in looking at the public's access to financial services.

Highly successful system despite the fact that Portugal is ranked 19 out of 27 EU member states in GDP per capita, 11th in population, and much smaller than the smallest of the EU-5 (a fifth the size of Spain).

Portugal has more ATMs per capita than any other country in EU; higher per capita debit and credit cards than most EU (all but UK, LUX, SWE); and ATM machines most advanced.

Portugal versus the EU-5 in payments

Country	ATMs per million inhabitants	POS terminals per million inhabitants	Percent with current accounts	Debit and credit cards per capita	GDP per capita (€)	Population (millions)
France	893	22,151	96%	1.27	30,632	65.18
Germany	1,030	8,693	95%	1.6	31,702	81.78
Italy	853	20,651	75%	1.11	26,012	60.75
Spain	1,241	29,546	88%	1.5	23,051	46.13
United Kingdom	1,026	21,688	92%	2.35	27,844	62.74
EU-5 Average	1,009	20,546	89%	1.57	27,848	62.32
Portugal	1,624	25,733	80%	1.89	16,050	10.65
Portugal Relative to EU-5	More than all 5	More than all 5	Better than Italy	More than all 5 except UK	Lower than all 5	Less than a quarter the size of the smallest, Spain

Portugal has one of the most efficient payment systems in Europe according to the ECB

ECB and central banks calculated how much of social resources used for payments.

ECB compared Portugal to UK, Spain, Belgium, Estonia, and Slovenia

Average social cost of payments for comparison countries was 1.11% of GDP versus 0.77% of GDP for Portugal

Social cost of Portuguese retail payment system almost a third (31 percent) lower than average for group of comparison countries

Portuguese retail payments have increased services over time

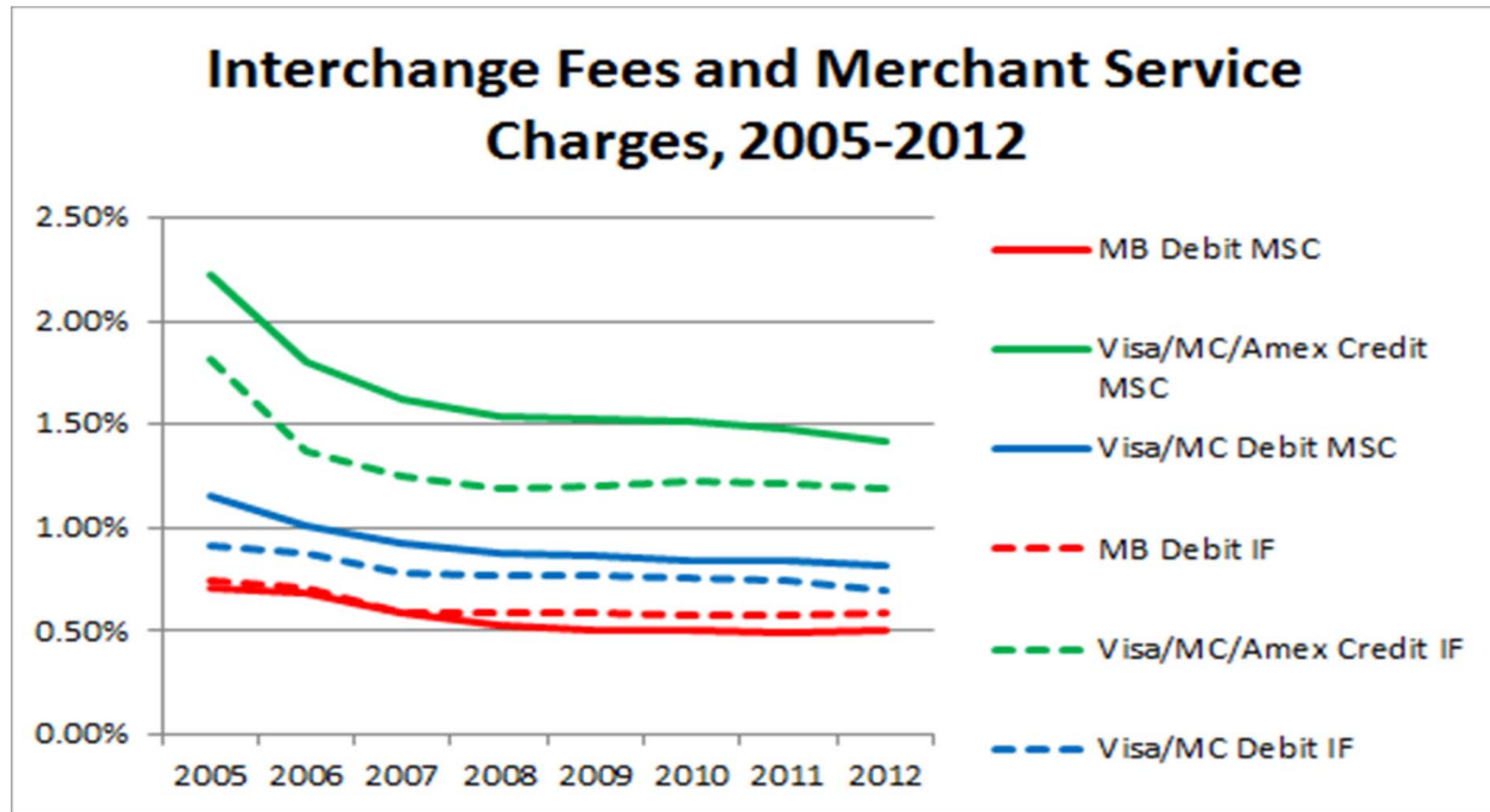
Current account services for Portuguese consumers has expanded and improved over time and one of best current account deals in Europe

ATM services for Portuguese consumers have improved over time

ATMs have become more widely available than anywhere else in Europe

	ATMs per million inhabitants	Debit and credit cards per capita	POS terminals per million inhabitants	Credit transfers and direct debits per million inhabitants	Check transactions per million inhabitants
2000	949	1.19	8,926.90	16.246	31.601
2011	1,624	1.89	25,733.40	41.784	10.014
Total percent Change (%)	71%	59%	188%	157%	-68%
CAGR (%)	5.00%	4.30%	10.10%	9.00%	-9.90%

Merchant Service Charges and Interchange Fees Have Declined



Portuguese payment success result of decades old investments and decisions

Portuguese retail payment system is superb compared to other countries and helps support transaction efficiency and economic development in Portugal

But quality is the result of investments made in the 1990s and early 2000s along with decisions on how to organize the system

Retail payments is currently running at a loss of €300+ according to Bank of Portugal; proposed EU interchange fee caps will expand by €137.

Innovation and investment has slowed considerably in recent years in part because a limited ability to earn return on capital

How will price controls affect the future evolution of the Portuguese retail payment system?

Section 2

PRICE CONTROLS AND MANDATED SERVICES

Types of regulation of payment systems

Prudential regulations

Assure reliability and stability of payments system

Provide standards that ensure interoperability

Behavioral regulations

Limit potential actions that harm customers through truth-in-lending and similar regulations

Competition regulations that limit anticompetitive behavior

Rate regulation and mandated services

Impose price caps including free €0 or 0% on the provision of services

Require the provision of services without providing for the ability to charge for those services

General observations on price controls

Widespread agreement among economists that price controls create significant economic distortions, reduce investment, slow economic growth, and reduce innovation

Public policy in most developed countries has dismantled extensive price regulation which is associated with failed economic experiments in the Soviet Union, North Korea, Cuba, and China

EU Member States have gradually reduced price regulation and state control following Thatcher reforms in UK in the 1980s

The rising tide of price controls in financial services especially interchange fee regulation is unusual given this consensus and history

Overview of price controls for payments in Portugal

Interchange Fees

- Regulation-induced reductions in interchange fees in mid 2000s
- Visa proposed settlement with EU will reduce domestic and cross-border interchange credit-card fees to .3%
- Threats from competition authority, EU legislation, etc. and the seemingly inexorable march to **zero**. Proposed EU legislation to cap debit at .2% and credit at .3%

ATM regulations

- Banks cannot change for most consumer services provided by ATMs in Portugal
- Essentially limits banks to inter-bank fees which are zero sum game for Portuguese banks so no significant revenue source
- Portuguese banks make half as much as Spanish banks from debit cards from interchange fees plus consumer fees (roughly 2% versus 1% of POS+ATM revenue)
- Subsidizes use of cash by consumers and cash preference by merchants

Fee ceiling on credit cards

- Limit rates on credit cards (APR including annual fee)

Mandated service offerings

- (Almost) free basic current account
- Check assurances for <€150

Section 3

ECONOMICS OF RETAIL BANKING AND PAYMENT PRODUCTS

Retail banking products are highly interconnected and interdependent because of how they are produced and sold. Payment products are part of these retail banking products.

- Payment and other retail banking products are usually offered as **bundles**
- Payment and other retail banking products are usually **complements** in demand and therefore purchased together regardless of whether they are bundled by provider
- Payment and other retail banking products involve **joint and fixed costs** which need to be recovered

Payments and other retail banking products are “**two-sided**” products offered by multi-sided platform businesses

- They involve joint provision to, and consumption by, consumer and merchant
- Neither merchant nor consumer can use or benefit unless the other uses too

Consumer payment and banking products

Current account package usually provides debit card, checks, direct debit/credit transfer, bill payment, ATM access, branch access and services, maybe credit card, and much more

Some services provided as part of a bundle at a single price, others may have annual fees or other charges, but there's lots of pricing flexibility

Some products are seemingly offered for free (e.g. walking into branch and withdrawing money) because they are part of basic bundle

Current account enables cross-sell with yet more consumer banking products such as mortgages and insurance

Merchant payment and banking products

Current account package usually provides merchant acquiring services, deposit taking, checks, bill payment etc.

Some services provided as part of a bundle at a single price, others may have annual fees or other charges, but there's lots of pricing flexibility

Some products are seemingly offered for free or at low cost because they are part of basic bundle

Current account enables cross-sell with yet more merchant banking products such business loans

Caps on fees on one element of bundle force banks to raise fees on other elements of bundle

Similar to restaurant—if government imposed cap on how much restaurants could charge for wine restaurant would raise price of food.

Multisided platforms create value by reducing transaction costs

Platforms enable two or more types of customers,

who could engage in mutually valuable exchange

to find each other through search and matching

to transact,

and to thereby create and exchange value.

Multi-sided platform businesses common

COMPANY	CUSTOMER SIDE A	CUSTOMER SIDE B	CUSTOMER SIDE C
Apple iOS	Phone users	Application Developers	Mobile network operators
Sony PlayStation	Console users	Game Developers	
Google Search	Searchers	Advertisers	Websites
Deutsche Borse	Liquidity providers	Liquidity takers	
Monster	Job seekers	Employers	
<i>Correio de Manhã</i>	Readers	Advertisers	
Colombo Shopping Center	Retail Stores	Shoppers	
American Express	Cardholders	Merchants	
Facebook	Friends	Advertisers	Application Developers

Two-sided platforms and pricing

Two-sided platforms have pricing structures that determine how much of their costs they recover from each side that jointly benefits from the platform

Typically but not always have “money” side and “subsidy” side.

US shopping mall model is shoppers get in for free, anchor stores get free or sharply reduced rent, and regular stores bear most of the cost.

Advertising-supported media model is viewers get content at less than cost of providing it and advertisers account for majority of revenue and virtually all of the profits.

“Subsidy” side has more elastic demand, has stronger positive network effects with the other side, more likely to determine which platform is going to be used, and are generally “needed more” to create platform value.

Subsidy side common for multi-sided platforms

COMPANY	CUSTOMER SIDE A	CUSTOMER SIDE B	CUSTOMER SIDE C
Apple iOS	Phone users	Application Developers	Mobile network operators
Sony PlayStation	Console users	Game Developers	
Google Search	Searchers	Advertisers	Websites
Deutsche Borse	Liquidity providers	Liquidity takers	
Monster	Job seekers	Employers	
<i>Correio de Manhã</i>	Readers	Advertisers	
Colombo Shopping Center	Retail Stores	Shoppers	
American Express	Cardholders	Merchants	
Facebook	Friends	Advertisers	Application Developers

One-sided economics wrong in a two-sided world

Profit-maximizing price for two-sided platform can be less than marginal cost, 0, or less than zero on one side

Unlike traditional markets no necessary relationship between socially or privately optimal prices on one side and marginal costs on that side.

Cost-based regulation wrong and not economically defensible for two-sided businesses

Payment card birth

10% fee for restaurant, free to cardholders, in 1950 at birth



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When the bill is presented you just sign it. That's all.

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WASHINGTON, D.C. (8): Dupont Circle Bldg. • NEW ORLEANS (1): 101 Poydras Street
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	<p>Full name _____</p> <p>Home address _____</p> <p>Company name _____</p> <p>Address _____</p> <p>Business phone _____</p> <p>Home phone _____</p> <p>Charge account no. _____</p>	<p>City _____</p> <p>State _____</p> <p>Country _____</p> <p>Signature of individual applicant _____</p> <p>Signature of executive _____</p>
	<p>CHECK ONE ONLY</p> <p><input type="checkbox"/> I am new to Diners' Club. I wish to open a new account.</p> <p><input type="checkbox"/> I am a former member. I wish to reactivate my account.</p> <p><input type="checkbox"/> I am a former member. I wish to transfer my account to this office.</p>	
	<p><small>Send no money now. We will bill you later. If you are new to Diners' Club, we will bill you for the first year's membership fee of \$5.00. If you are a former member, we will bill you for the first year's membership fee of \$5.00. If you are a former member, we will bill you for the first year's membership fee of \$5.00.</small></p>	

Merchant pays model for cards—forever, almost everywhere

Ever since the beginning of the card industry (1950 in US) most of the costs for payment cards has been recovered from the merchant side so merchants are the money side and consumers are the subsidy side

Consumers have highly elastic demand for payments in part because cash and check systems subsidized by government

Consumers dictate choice of instrument at merchant

Merchants have relatively inelastic demand because they want to please customer and make sale

Virtually every system, virtually everywhere in the world, has adopted the merchant pays model because of the fundamental two-sided economics of payments.

Two-sided pricing structures can provide incentives for rent seeking

Money side would like the subsidy side to pay

If money side is “better organized” than subsidy side it can use political lobby to get laws and regulations that benefit it

In payments, a few large merchants have incentive and ability to lobby whereas consumers don't. Can get ears of banking regulators, competition authorities, and legislators

Section 4

ECONOMIC IMPACT OF PRICE CONTROLS

Economic impact of price caps: there's no free lunch

Price caps on one of bundle of products

Price cap on one product can affect service level of that product and prices and service levels of any and all other related products

This is just like pressing on balloon

No different than capping price of wine or dessert at restaurant; price of other items will go up

Price caps on one side of a two-sided platform

If the money side pays less then the subsidy side has to pay more

This is known as the “waterbed” effect

There's no free lunch

While price caps might reduce profits in general they will shift cost-recovery between products, reduce service levels, and between customer groups.

But someone, somewhere, pays for the free lunch provided by the price cap.



Impact on consumers from price caps in two-sided markets depends on pass through

Economics of pass-through shows when firms have increase in cost they pass part of it on to consumers and take part of it as reduced profit generally. Question is what fraction of cost increase is borne by consumers versus business.

When banks lose revenue from caps they can make up from consumer (higher fees, reduced services) or by reducing profits.

When merchants have lower costs they can pass some of savings on to consumers and keep some as profits.

Net effect of price cap consumers therefore depends on how much they lose on bank side versus how much they gain on merchant side.

Economic studies of pass through, for many countries, find retail banks pass on 80-100% of cost savings and merchants pass on about 50% of cost savings.



Empirical studies of price caps on interchange fees find consumers on net lose

Stakeholder	Prices	Profits	Comment
Consumer	Prices up and service down from bank		Card fees up, rewards down, Current Account fees up, various services cut, etc.
Issuing Bank	Prices up and service down to consumer	Profits down	Evidence in most places is that banks passed on most of interchange fee revenues to consumers in the form of lower prices, better services; cutting interchange fees runs this in reverse
Acquiring Bank	Prices down but usually passed 100% on merchant	Profits a wash	Evidence is that acquirers at least in competitive acquiring markets pass all savings on
Merchant	Costs down	Profits up	Evidence is that merchants don't pass on much in short run but may over time but increase their profits
Consumer	Prices paid to merchant down		Very little empirical evidence of this in part because price changes are tiny
Net effect on consumer	Pay more for banking services than they recover from merchants		Best evidence is that consumers definitely lose on the bank side and may make some back merchant side for a net loss

Based on studies for Australia, Spain and United States.

US experience on debit card interchange fee price caps

Price caps started in Oct 2011

- Reduction from around 44 cents per transaction to around 24 cents per transaction

Observed impact on consumers

- Current account fees went up/"free banking" curtailed and various fees went up to recover money
- Merchants claimed passed on savings but no evidence of it and some merchants told investors that were bringing at least some of the savings to the bottom line

Indirect evidence from looking at stock prices (Evans, Chang, and Joyce (2013))

- Net consumer long run welfare loss of \$22 billion
- Merchant market cap gain of about \$38 billion as a result of passing through about 50% of cost savings to consumers and keeping 50%
- Bank market cap loss of around \$16 billion as a result of passing through about 80% of revenue loss to consumers and taking 20% as hit to bottom line
- Wealth transfer to merchants from consumers and banks

Impact of Interchange Fee Caps in Portugal

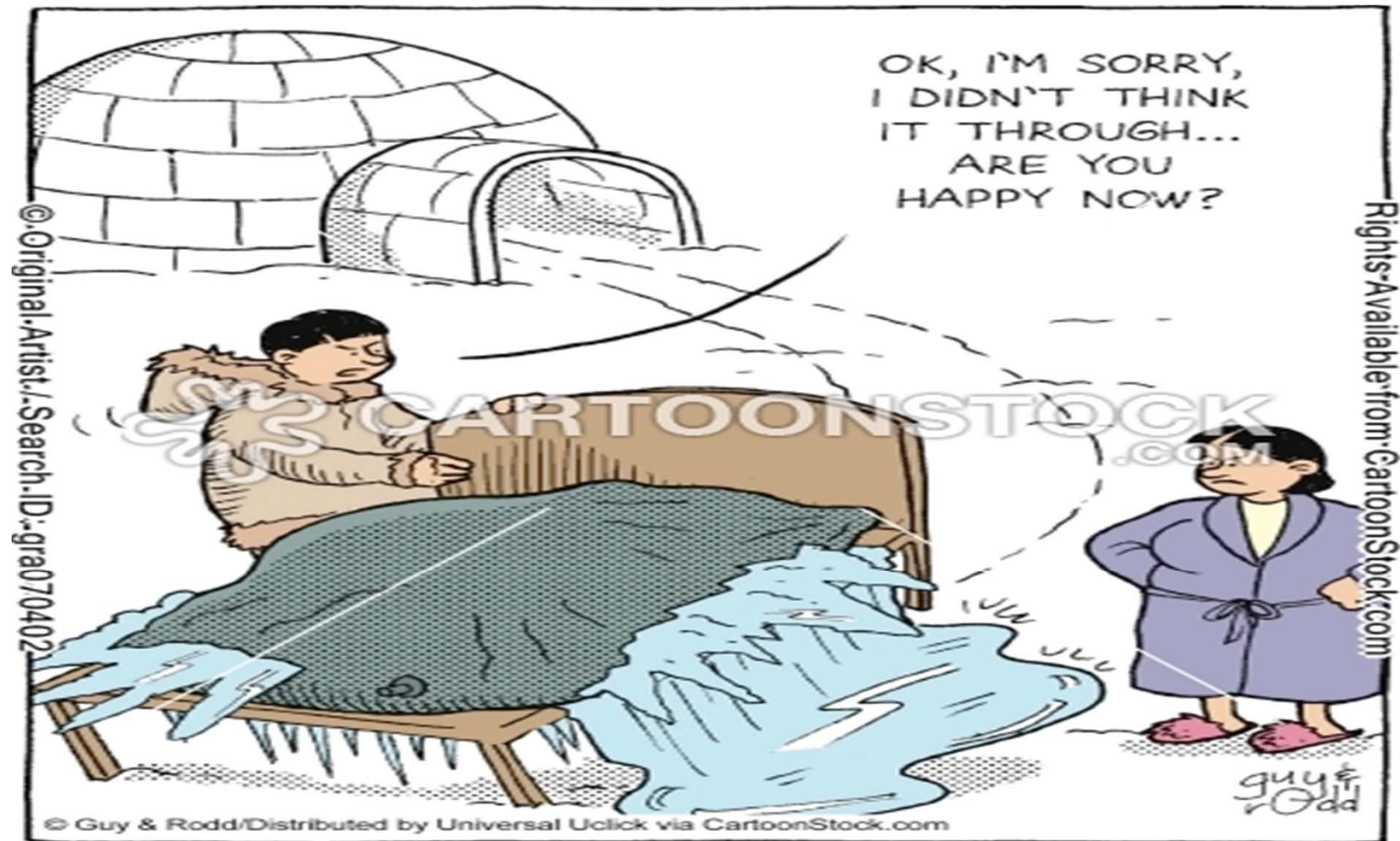
No formal studies of past interchange fee reductions but anecdotal information is consistent with other countries—banks had to adjust other fees to consumers upwards to offset loss of revenue from merchants. No evidence of merchants lowering prices.

Retail banking very competitive in Portugal with consumers having many choices. Consistent with high pass through rate of cost increases and decreases.

Retail sector concentration similar to other countries for which average pass through is around 50 percent.

Therefore expect that interchange fee caps would impose net harm on consumer in Portugal, and costs would shift from merchants to banks and consumers.

Price caps particularly prone to unintended consequences in two-sided markets



Section 5

CONCLUSIONS

Conclusions

Portugal has first-class payment system that is one of the most advanced in the EU.

Portugal has achieved this status in payments mainly as a result of investment decisions that were made in the 1990s.

But series of price caps, and mandated service regulations, has made it difficult to earn profits from payments at current service levels. Further price caps such as the Visa agreement with the EU to cap domestic interchange fees and the proposed EU legislation will further reduce profits.

The inevitable result of these price caps and mandated service regulations will be to raise prices and reduce service to consumers and reduce investment in the payments system.

Long term, the effects of price caps will be to turn a first-class payment system into a second-class payment system.

Reduced performance of payment system will slow economic growth and cost jobs.

Other consequences of price caps include artificial stimulation of cash use and with it tax avoidance and the black market economy.

Thank You!

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