

**"Identifying Industry Margins with Price Constraints: Structural Estimation on Pharmaceuticals",
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I. ONLINE APPENDIX

A. Additional Tables on Estimated Margins

Table B1: Own-Price elasticities of main branded drugs (France)

Drug	Subclass	2003	2006	2009	2012
Losec	PPI	-5.97	-7.86	-5.48	-6.86
Nexium	PPI	-10.94	-6.40	-3.90	-4.66
Lanzor	PPI	-7.78	-6.51	-5.47	-4.85
Takepron	PPI	-7.83	-6.47	-5.25	-4.02
Pantozol	PPI	-7.56	-5.41	-4.91	-5.05
Pariet	PPI	-7.89	-6.05	-4.94	-4.63
Tagamet	H2	-2.74	-7.19	-6.97	-8.88
Zantac	H2	-4.88	-6.76	-5.63	-7.56
Pepcidine	H2	-6.27	-12.81	-12.94	-15.87
Cytotec	Prost.	-2.10	-1.98	-2.45	-2.09

Note: PPI: Proton Pump Inhibitors. H2: H₂ receptor antagonist. Prost.: Prostaglandins.

Table B2: Average price-cost margins by year (France)

Year	Not accounting for Price Regulation			Accounting for Price Regulation		
	All Drugs	Branded	Generic	All Drugs	Branded	Generic
2003	27 percent	21 percent	33 percent	21 percent	16 percent	26 percent
2004	28 percent	23 percent	30 percent	20 percent	16 percent	21 percent
2005	27 percent	23 percent	28 percent	20 percent	16 percent	22 percent
2006	30 percent	21 percent	33 percent	22 percent	15 percent	24 percent
2007	27 percent	21 percent	28 percent	21 percent	16 percent	23 percent
2008	29 percent	20 percent	32 percent	23 percent	15 percent	26 percent
2009	31 percent	22 percent	33 percent	24 percent	16 percent	26 percent
2010	38 percent	20 percent	42 percent	28 percent	15 percent	31 percent
2011	40 percent	22 percent	43 percent	30 percent	16 percent	33 percent
2012	44 percent	21 percent	47 percent	33 percent	17 percent	35 percent
2013	53 percent	29 percent	56 percent	38 percent	21 percent	40 percent

Note: When not taking into account price regulation, we infer price cost margins as if firms were free to choose price. Margins as a percentage of price.

Table B3: Confidence intervals on Percent Price Changes for Branded Drugs from Free Pricing to Current Regulation

Subclass	H2					PPI				Prost.	Combi.
Molecule	Cimet.	Ranit.	Famot.	Nizat.	Omepr.	Lanso.	Panto.	Esom.	Rabe.	Miso.	
Drug	Tagamet	Zantac	Pepcidine	Panaxid	Losec	Lanzor	Pantozol	Nexium	Pariet	Cytotec	Pylera
		Raniplex				Takepron					
2003	[-20.3;-6.9]	[-5.9;0]	[-3.7;-9]	[-3.4;-9]	[-1.5;-7]	[-2.4;-7]	[-2.8;-7]	[-1.5;-5]	[-2.3;-8]	[-18.9;10.7]	
2004	[-19.2;-7.8]	[-8.8;-1.1]	[-6.6;-8]	[-3.6;-9]	[-2.3;-3]	[-2.6;-6]	[-3.1;-7]	[-1.3;-6]	[-2.5;-8]	[-19.4;8.4]	
2005	[-18.9;-6.9]	[-10.2;-1.6]	[-7.5;-1.3]	[-3.6;-9]	[-3.5;-2]	[-2.4;-9]	[-3;1.1]	[-1.7;-1]	[-2.4;-1]	[-20.8;9.5]	
2006	[-21.5;-10.2]	[-7.4;-1.1]	[-7.6;-2.4]	[-3.3;-1.3]	[-4.9;-7]	[-2.7;-1.1]	[-3.5;-1.5]	[-1.7;-1.1]	[-2.7;-1.2]	[-20.2;9.5]	
2007	[-22.7;-10.4]	[-7.3;-1.3]	[-6.3;-2.1]	[-3.6;-1.3]	[-5.2;-9]	[-6;-5]	[-3.5;-1.5]	[-2.3;-1.6]	[-2.5;-1.4]	[-21;10.4]	
2008	[-24;-15]	[-6.5;-9]	[-5.6;-1.9]	[-3.1;-1.6]	[-6.2;-1.6]	[-7;-6]	[-3.4;-1.8]	[-3.4;-1.7]	[-2.3;-1.5]	[-20.8;15.5]	
2009	[-19.5;-9.8]	[-6.4;-1.1]	[-6.4;-2.3]	[-3;1.7]	[-7.4;-2.5]	[-7.3;-7]	[-11;-3.8]	[-4.3;-2.6]	[-2.2;-1.5]	[-20.8;9.7]	
2010	[-14.7;-7.4]	[-5.5;-4]	[-6;-2]	[-2.9;-1.9]	[-9.8;-3.5]	[-11.6;-3]	[-13.9;-6.1]	[-4.7;-2.6]	[-2.3;-1.6]	[-18.3;10.9]	
2011	[-16.4;-9.5]	[-5.7;-8]	[-6.1;-2.1]	[-4.7;-1.3]	[-11;-4.1]	[-13.9;-4.2]	[-19.3;-9.7]	[-12.4;-4.6]	[-2.8;-1.4]	[-19.1;13.7]	
2012	[-27.8;-17]	[-6.9;-1.3]	[-6.9;-3.3]	[-4.6;-1.2]	[-13.7;-5.5]	[-16.3;-6.3]	[-22.9;-10.9]	[-21.1;-10.6]	[-23.4;-12.5]	[-18.9;7.1]	
2013		[-11.1;-5.9]		[-9.3;-3.6]	[-25.5;-13.9]	[-21.9;-9.9]	[-31.7;-18]	[-29.4;-16]	[-31.2;-17.8]	[-22.9;1.6]	[-12.3;-4.6]

Note: Percent changes are computed as (observed price - counterfactual price)/observed price and can be above 100%. Empty cells when branded molecules had not entered yet or had exited.

Table B4: Confidence intervals on Percent Price Changes for Generics From Free Pricing to Current Regulation

Subclass	H2				PPI			
Molecule	Cimet.	Ranit.	Famot.	Omepr.	Lanso.	Panto.	Esom.	Rabe.
2003	[-5.5;2.2]	[-3.9;1.8]						
2004	[-4.5;2.6]	[-5.2;1.3]	[-3.3;2.3]	[-1.7;9]				
2005	[-5.8;4.9]	[-5.9;1.1]	[-4.4;1.6]	[-2.1;1.2]				
2006	[-8.5;1.6]	[-7;8]	[-2.9;2.1]	[-2.8;1.3]				
2007	[-8.5;2.4]	[-7.2;4]	[-2.2;1.8]	[-2.6;1.6]	[-4.7;1.4]			
2008	[-10.2;-6]	[-6.5;4]	[-2.2;1.4]	[-2.7;1.6]	[-5.5;1.3]			
2009	[-5.7;2.9]	[-7.4;4]	[-2.2;1.7]	[-3;1.7]	[-5.8;1.5]	[-5.5;1.3]		
2010	[-2.4;6]	[-7;5]	[-2.3;1.5]	[-4;2]	[-7.4;9]	[-5.9;1.4]		
2011	[-2.8;3.3]	[-7.6;0]	[-2.6;1.2]	[-4.9;1.6]	[-8.7;2]	[-8.1;7]	[-6.3;1.1]	
2012	[-7.3;2.1]	[-8.3;-8]	[-1.5;1.9]	[-6.8;7]	[-11.8;-1.3]	[-10.9;0]	[-9.5;-2]	[-7.7;1.9]
2013	[-17.2;-2.9]	[-7.6;2]	[24.1;30.1]	[-12.3;-1.8]	[-15;-3.1]	[-13.8;-1.6]	[-12.5;-8]	[-14.9;-2.8]

Note: Percent changes are calculated as (observed price - counterfactual price)/observed price and can be above 100%. Empty cells when generics had not entered yet.

Table B5: Confidence intervals on Percent Price Changes for Branded Drugs From Current Regulation to External Reference Caps

Subclass	H2					PPI				Prost.	Combi.
Molecule	Cimet.	Ranit.	Famot.	Nizat.	Omepr.	Lanso.	Panto.	Esom.	Rabe.	Miso.	
Drug	Tagamet	Zantac	Pepcidine	Panaxid	Losec	Lanzor	Pantozol	Nexium	Pariet	Cytotec	Pylera
		Raniplex				Takepron					
2004	[-8;-5]	[0;6.7]	[-1.3;-1.1]	[-2.8;-2.7]	[-7;1.1]	[-1.8;-1.8]	[3;2.2]	[-8;-5]	[-4;-3]	[-8.8;-4.4]	
2005	[-1.6;-1.2]	[-3;3.8]	[-1.2;-8]	[-7.3;-7.3]	[-9;1.1]	[-2.1;-2.1]	[5;2.1]	[-6;1.7]	[-1;1.6]	[-30.2;-30.1]	
2006	[-3.2;-2.9]	[-1.9;4.8]	[-4;8]	[-6.4;-6.4]	[-9;1.4]	[-7;-6]	[1;3.5]	[-4;2]	[4;3.6]	[-34.2;-34.1]	
2007	[-1.3;1.8]	[-2.9;-2.2]	[-2;9]	[-6.5;-6.5]	[-1.4;1.6]	[0;1.4]	[1.4;2.7]	[5;3.6]	[1;1.5]	[-35.6;-35.6]	
2008	[-2.2;-8]	[-1.2;8]	[-4;6]	[-1.8;2.8]	[-1.6;2.4]	[-6;3.9]	[6;8]	[1.4;5.7]	[-4;-2]	[-36.1;-35]	
2009	[-7;1.3]	[-2.3;-9]	[-4;2]	[-2.1;2]	[-2.6;3]	[-1;2.7]	[-3.1;-3.1]	[1.1;8.4]	[-5;3.1]	[-37.8;-34.4]	
2010	[-4.8;-3.2]	[-2.3;-8]	[-2.9;-2.5]	[-4.6;-4.6]	[-1.8;3.1]	[-2;5.6]	[-2.5;-2.4]	[7.5;13.7]	[9;3.1]	[-41;-36.1]	
2011	[-1;1]	[-2.3;1]	[0;9]	[-9.1;-9]	[-1.9;2.3]	[4;2.7]	[1.8;6.2]	[9.2;18]	[3.5;7.1]	[-42.2;-36.5]	
2012	[-3;15.4]	[-5.5;-2.5]	[-1;6]	[-7.2;-7.1]	[-3;9.6]	[5;10.6]	[7.3;17.2]	[13.6;30.8]	[1.6;4.8]	[-179.9;-40.6]	
2013		[-3.7;-9]		[-4.5;-2.3]	[-18.2;-6.3]	[-17.8;-5.5]	[-18.2;-6.6]	[-23.9;-10.5]	[-22.9;-10.6]	[-42.7;-37.4]	[-8.7;-7.2]

Note: Percent changes are calculated as (counterfactual price - observed price)/counterfactual price and can be above 100%. Empty cells when branded molecules had not entered yet or had exited.

Table B6: Confidence interval on Percent Price Changes for Generics From Current Regulation to External Reference Caps

Subclass	H2					PPI			
Molecule	Cimet.	Ranit.	Famot.	Omepr.	Lanso.	Panto.	Esom.	Rabe.	
2004	[-52.4;-28.1]	[-27.5;-16.5]	[-30.9;-18.2]	[-10.1;-6.7]					
2005	[-124.1;-50.6]	[-28.7;-16.8]	[-30.7;-17.9]	[-13.5;-8.7]					
2006	[-114;-52.7]	[-33.7;-19.3]	[-39.3;-22]	[-17.9;-11.2]					
2007	[-145.4;-60.6]	[-33.6;-19.7]	[-38.1;-22.7]	[-18.7;-11.5]	[-30.3;-17.9]				
2008	[-159;-53.4]	[-30.7;-18.4]	[-39.1;-24.1]	[-22.1;-13.6]	[-36.5;-21.3]				
2009	[-156.2;-63.7]	[-35.9;-21.1]	[-41.1;-24.1]	[-24.8;-15.2]	[-42;-24.2]	[-39.1;-22.6]			
2010	[-163.5;-65.6]	[-33.5;-20]	[-39.2;-23.5]	[-37.5;-22.2]	[-68;-37.5]	[-53.3;-30.6]			
2011	[-165.7;-65.5]	[-35.3;-21]	[-37.9;-22.9]	[-42;-24.6]	[-80.5;-42.2]	[-72.5;-38.4]	[-45.8;-26.9]		
2012	[-265.2;-77.6]	[-36.3;-22]	[-49.7;-29.2]	[-43.1;-25.2]	[-90.2;-44.7]	[-87.9;-43.2]	[-75.9;-40.3]		[-145.6;-56.1]
2013	[-106.6;-15.2]	[-28.7;-16.7]	[-35.7;-21]	[-75.2;-41.4]	[-99.9;-50]	[-108.7;-51.7]	[-106.6;-52.3]		[-109.4;-52.1]

Note: Percent changes are calculated as (counterfactual price - observed price)/counterfactual price and can be above 100%. Empty cells when the generics had not entered yet.