PERSPECTIVES THE BRAZILIAN HEALTHCARE INDUSTRY

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Agenda

- A regulated industry

- Consolidation

- Concentration

- Beneficiaries

- VCMH – cost trends

- Perspectives

A regulated industry

Regulation is necessary

- Market imperfections

  - Information assymetry

  - Equity, adverse selection, risck selection

  - Moral hazard

  - Third party payer

Regulated matters

- Administrative
  - Operators and products must be registered
  - Start up and close down rules
  - Continuity of contracts (individual)

- Medical assistance
  - Integral coverage – all diseases under the IDC
  - Limits to waiting times
  - Prohibitions: to exclude diseases, to limit healthcare periods or expenditures, to select risks

- Economic-financial
  - Solvency and liquidity,
  - Minimum capital, technical reserves, guarantees and provisions
  - Price readjustments

Results after 11 years of regulation

- One law regulates all types of operators

- Inhibited unfaithful competition

- Increased trustworthiness / reliance of health plans

- Standardized products

- Regulation had positive impacts, but it …
  - Reduced product diversity
  - Limited entrepreneurial initiatives and range o consumer choices
  - Reduced growth potential – regulatory, judicial and price risks

Types of operators

- Health Insurance

- Health Plans - HMO

- Medical Cooperatives – Unimeds

- Self-maintained health plans

- Philantropy

Operators - Main numbers

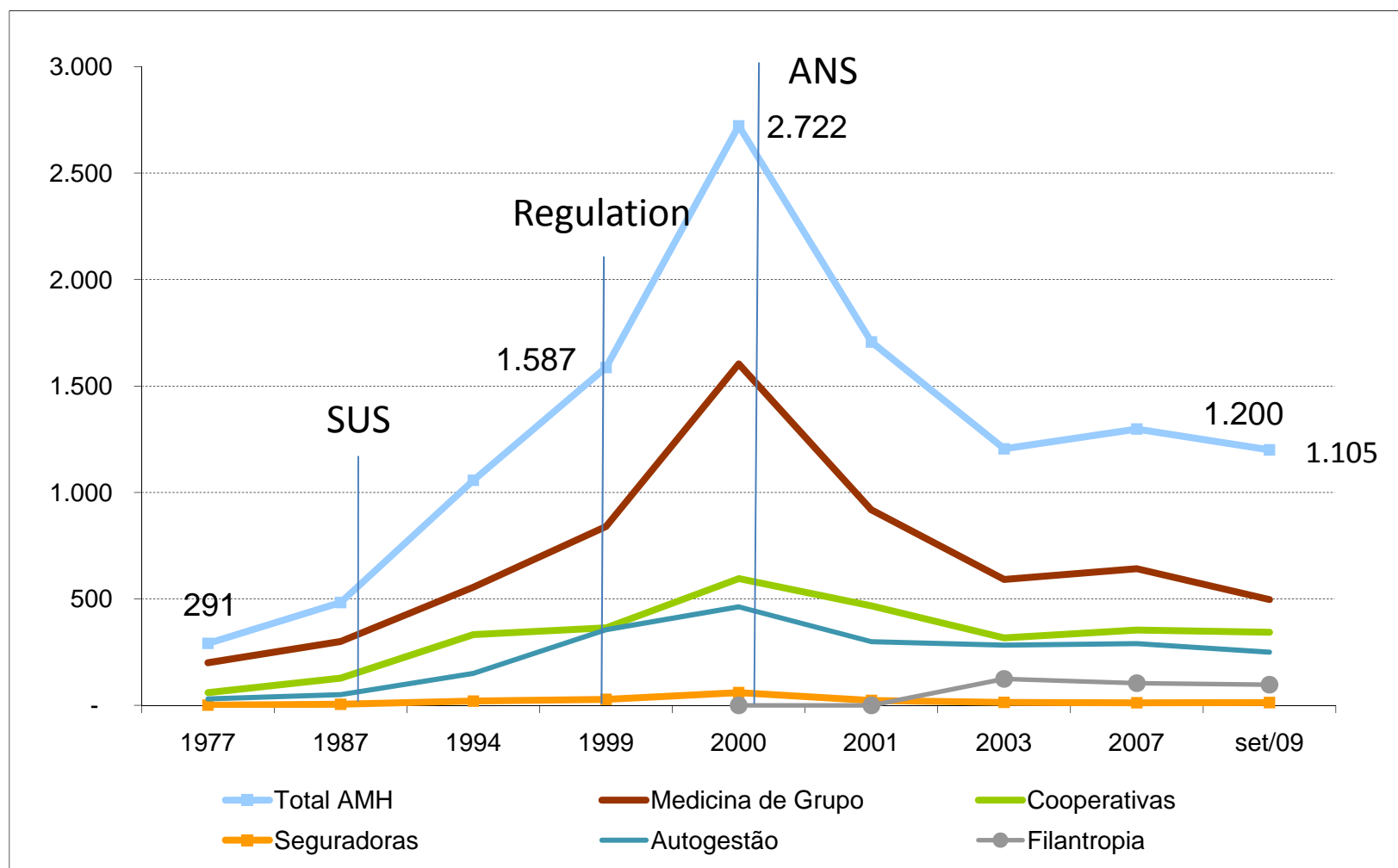| Brazil	September/09		2008
Types	Operators	Beneficiaries (%)	Receipts (%)
Insurers	13	11,7	18,3
HMO	497	37,6	29,1
Cooperatives	343	35,1	35,3
Self-maintained	250	12,3	11,8
Philantropy	97	3,2	3,7

Consolidation

Operators - origin

- Started in late 1950s by practitioners

- A few grew up but continued as family companies

- The advantages of being big stimulates further growth

- Sluggish market induced them to mergers and acquisitions

- Size requires professional governance

- IPO to speed up growth

- Brief interruption during the global crisis

Industry is on the road to maturity
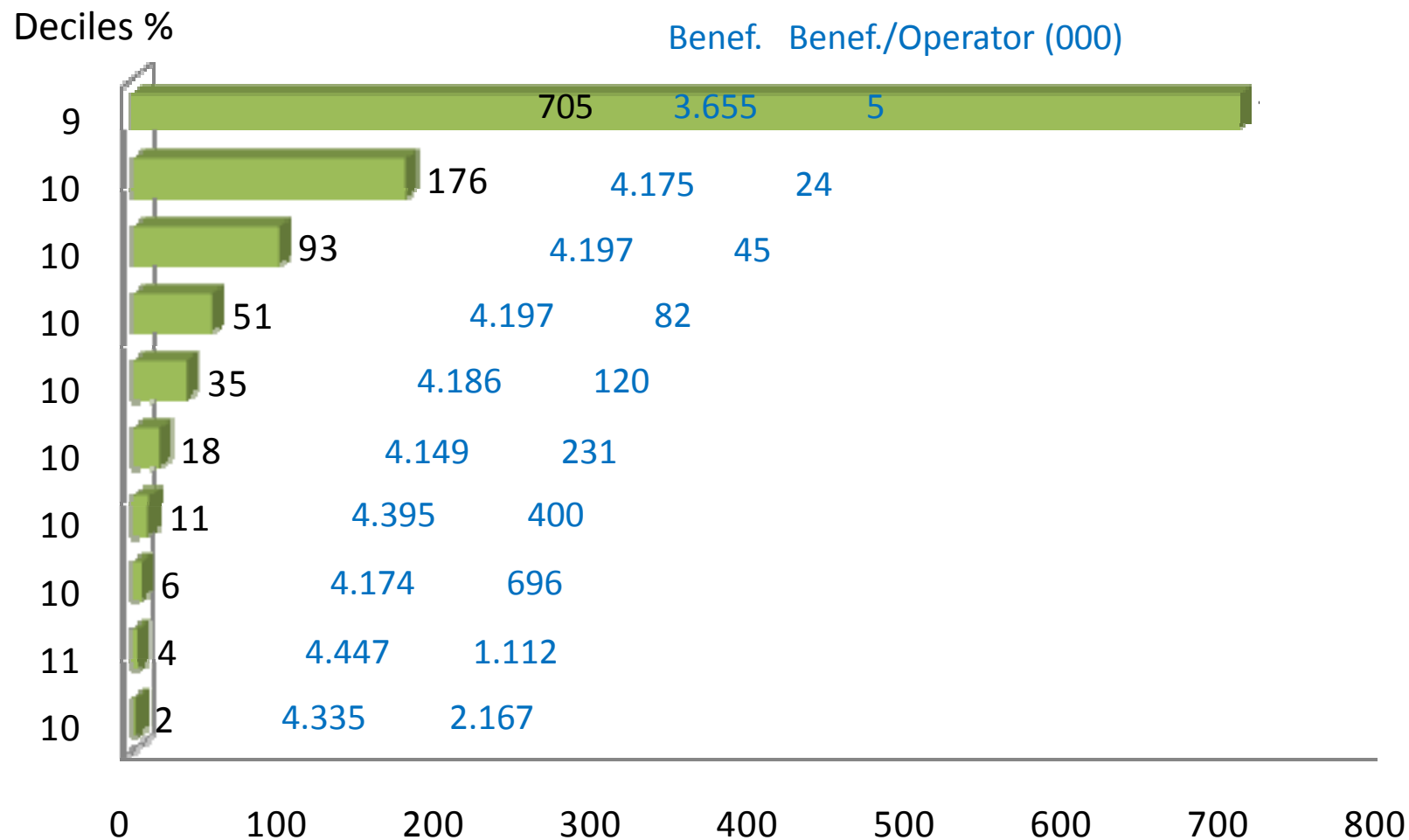
Number of Operators

Consolidation

- Close down of operators which never had beneficiaries (precautionary constitution)

- Insolvency caused by fierce competition

- Inability to form the required guarantees and technical reserves

- Because of acquisitions and mergers

The importance of size

- Economies of scale – smaller administrative cost per beneficiary

- Rick pooling:

  The larger the number of beneficiaries the smaller the expenditure variance and the relative amount of reserve requirements

  – Example, for a catastrophic risk of 1%
    - Plan with 100 beneficiaries: 1 expected case
    - Plan with 100 thousand beneficiaries: 1000 expected cases

    - The occurrence of 1 case above the expected:
      – Catastrophic expenditures double in the first case
      – Bur increases by only one thousandth in the second

Concentration

Operators and beneficiaties

Beneficiaries per operator

Countries	Benef./ Operator (000)
Brazil 2003	21
Brazil 2008	35
United States	196
Australia	288
Chile	381

Concentration indices

- C4 – market share of the 4 larger companies

  C4 > 75% - Concentrated

- HHI – sum of square market shares
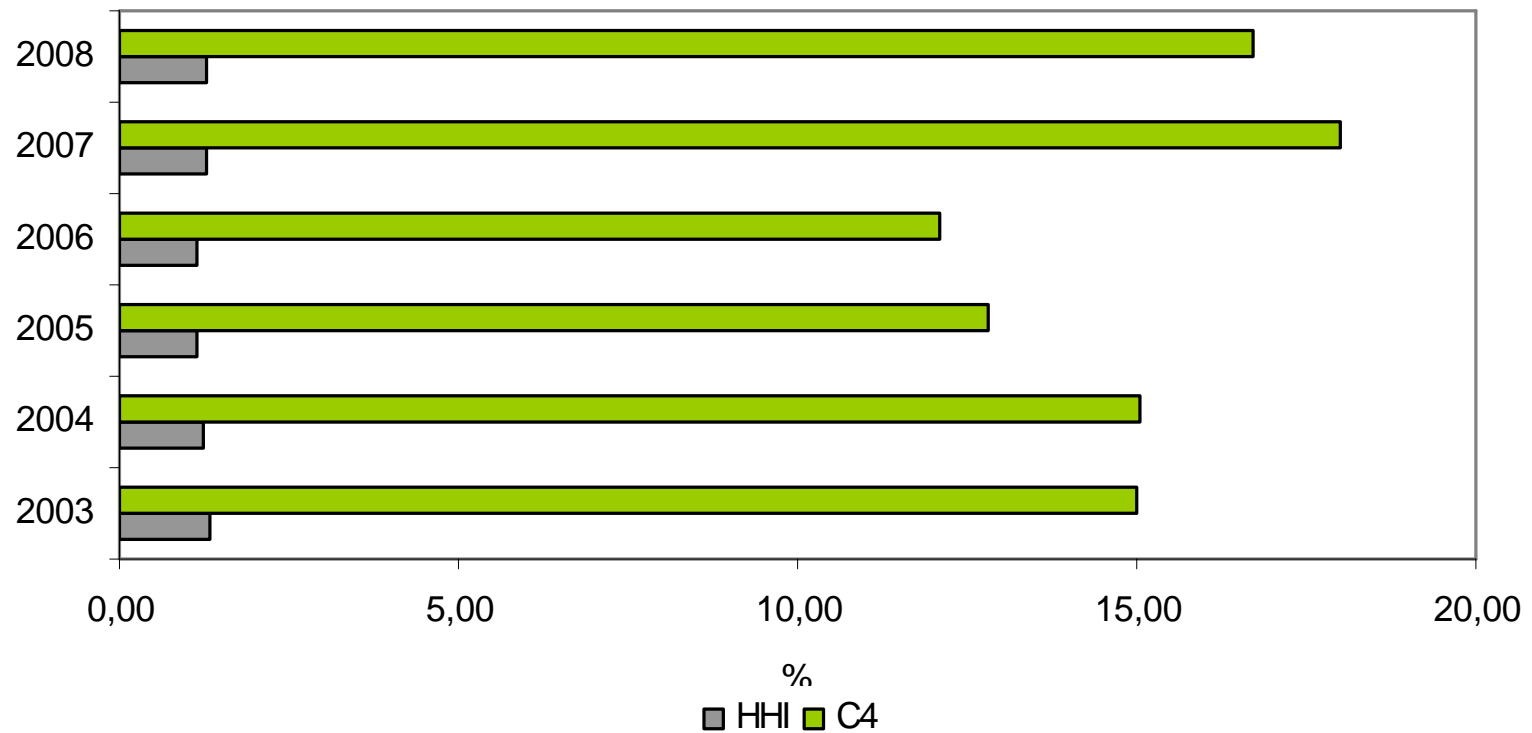
  HHI < 10 - competitive

  HHI between 10 & 18 - moderately concentrated

  HHI > 18 – highly concentrated

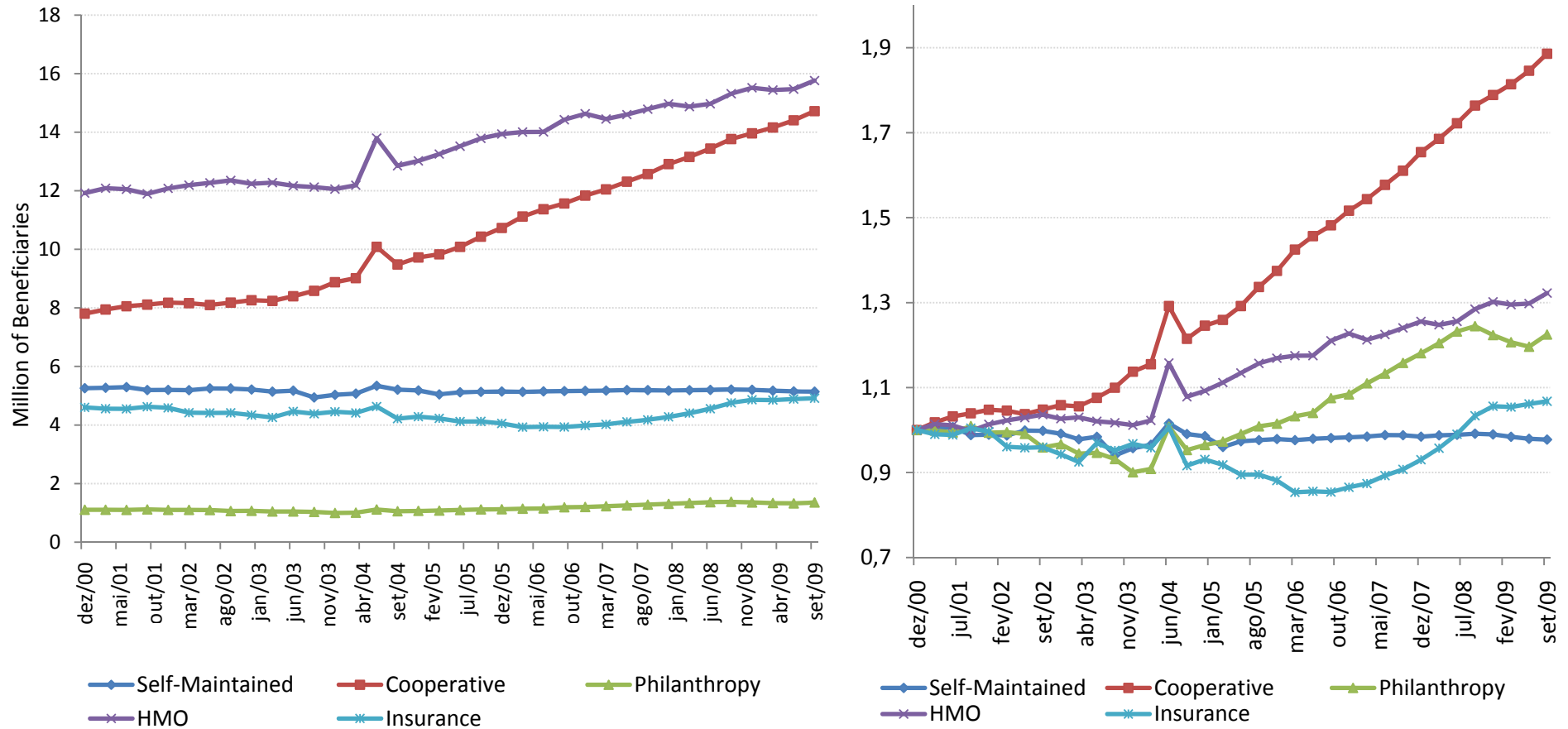# National concentration indices

C4 & HHI - 2003 a 2008

Concentration in Metropolitan Areas

MA	Operators	Beneficiaries (000)	C4	HHI
SP	761	9.745	**36,1**	**4,9**
RJ	599	4.429	**38,7**	**5,2**
BH	449	1.729	**50,7**	**14,5**
PA	355	1.170	**42,7**	**6,9**
Recife	295	988	**33,2**	**4,8**
Salvador	349	872	**34,5**	**5,3**

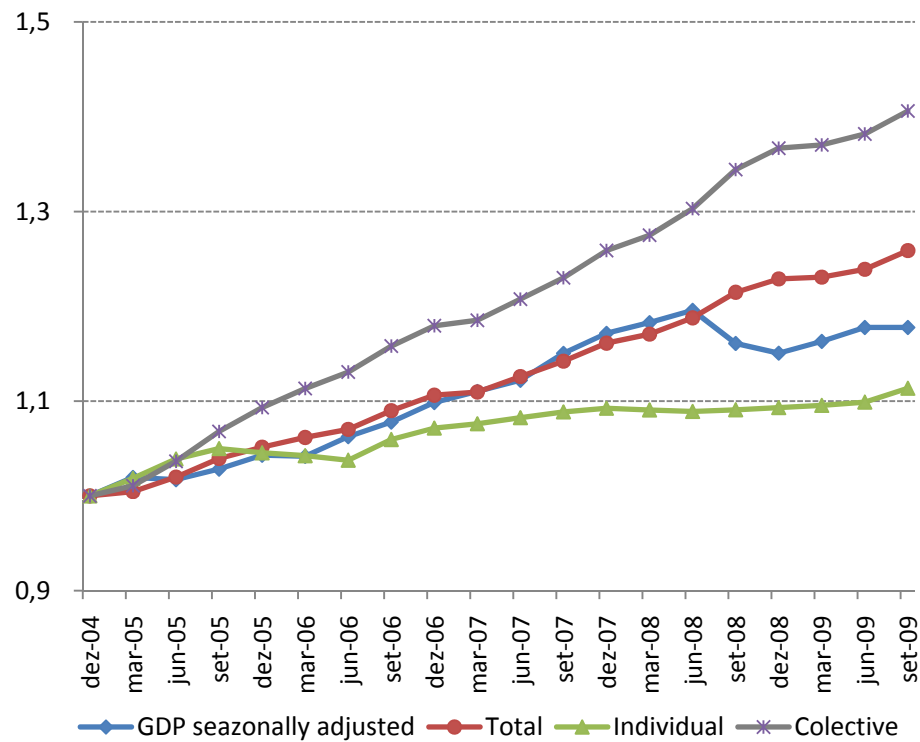| Mato Grosso				
Cuiabá	129	224	**73,4**	**29,7**
Interior	200	70	**63,0**	**12,5**

Beneficiaries

Beneficiaries by type of operator
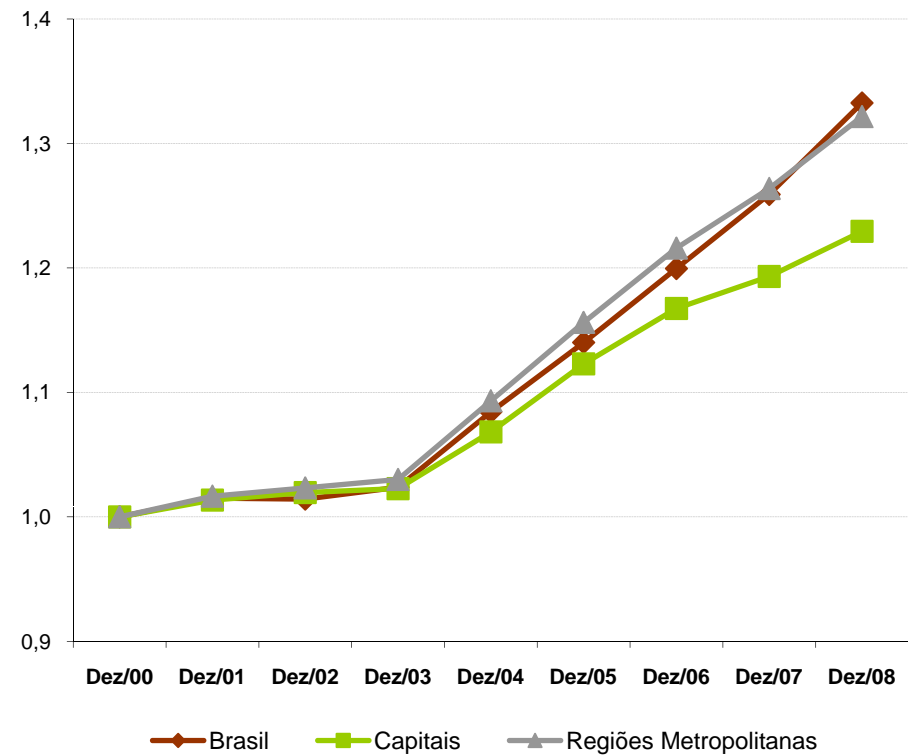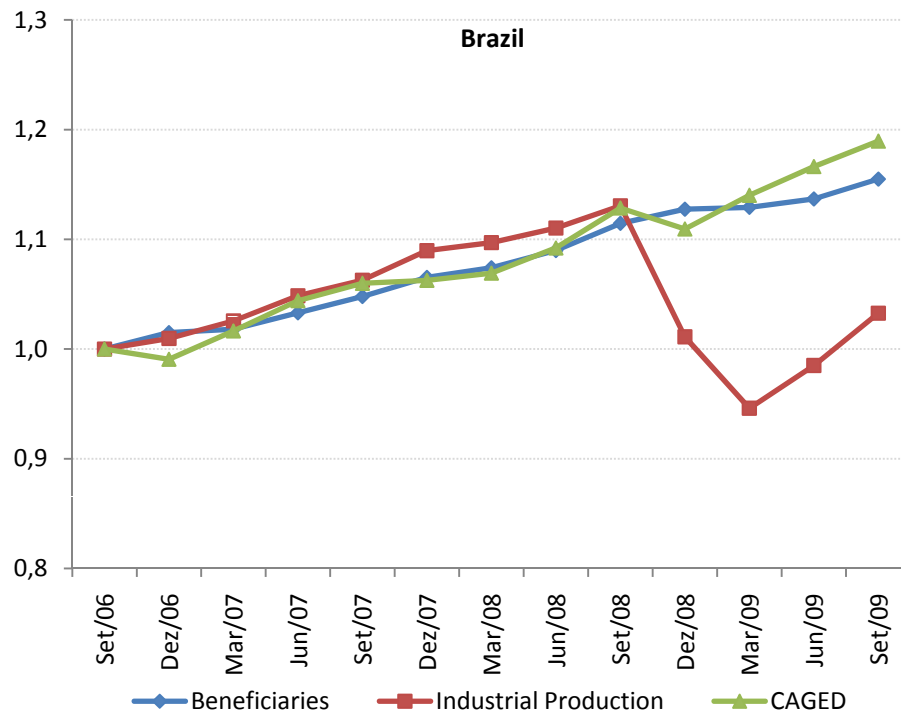

Source: Tabnet/ANS

Macro performance

Source: ANS tabnet 14dez009, IBGE sidra table 1621

Source: ANS - Tabnet; IESS

Macro performance

Brazil

Sources: ANS-Tabnet, IBGE and CAGED

Legend: Beneficiaries — Industrial Production — CAGED

Metropolitan Areas - PME - IBGE

Sources: ANS-Tabnet and Monthly Employment Survey (PME)/IBGE
* M.A.: Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo, Porto Alegre

Legend: Beneficiaries — Formal Employment — Informal Employment

Annual and quarterly growth rates

Medical plans	Annual rate (%)		Quarterly rate (%)					
	2007	2008	2007	2008	IVQ/08	IQ/09	IIQ/09	IIIQ/09
Brazil	5,0	5,8	1,2	1,4	1,2	0,2	0,7	1,6
State Capitals	2,2	3,0	0,5	0,8	1,2	0,0	0,3	1,2
M. Areas	3,9	4,6	1,0	1,1	1,1	0,0	0,4	1,6
Coop. Unimeds	9,1	8,1	**2,2**	**2,0**	**1,4**	**1,4**	**1,7**	**2,2**
HMO	2,3	3,7	0,6	0,9	1,3	-0,5	0,2	1,9
Insurance	7,5	13,5	1,8	3,2	2,2	-0,2	0,7	0,6

Fonte: ANS - Tabnet; IESS

Annual and quarterly growth rates

Individual Plans	Annual rates (%)		Quarterly rates (%)					
	2007	2008	2007	2008	IVQ/08	IQ/09	IIQ/09	IIIQ/09
Brazil	2,0	0,1	0,5	0,0	0,2	0,2	0,3	1,3
Coop. Unimeds	2,5	2,8	0,6	0,7	0,6	1,1	1,2	1,3
HMO	3,3	-0,6	0,8	-0,2	0,5	-0,1	0,0	1,7
Insurance	-9,4	-10,1	-2,4	-2,6	-2,3	-2,1	-2,0	-1,4

Collective plans								
Brazil	6,7	8,6	1,6	2,1	1,7	0,3	0,8	1,8
Coop. Unimed	12,5	10,7	3,0	2,6	1,8	1,7	2,0	2,7
HMO	2,7	6,6	0,7	1,6	2,0	-0,6	0,3	2,1
Insurance	11,1	17,7	2,7	4,2	2,8	0,1	1,0	0,6

VCMH

cost trends

Expenditures index

Price variatiom does not measure cost variation

$$Cost = P \times Q$$

Inflation: a measure of price changes

Cost variation is the sum of:

Price variation and
Variation in Quantity

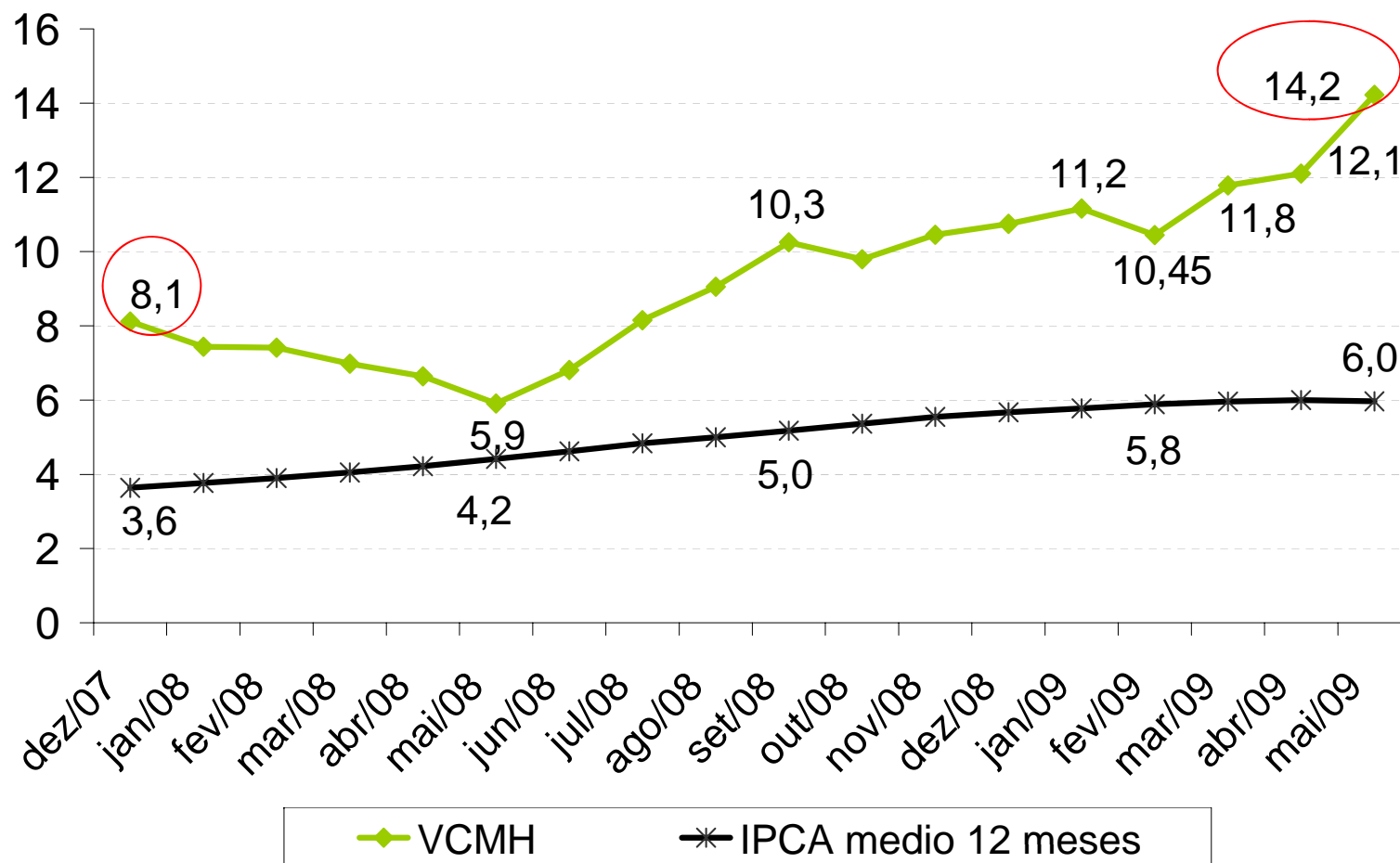$$\frac{\Delta C}{C} = \frac{\Delta P}{P} + \frac{\Delta Q}{Q} + \frac{\Delta P \times \Delta Q}{C}$$

inflation

Results

(period 2) / (period 1)	VCMH %
2007/ 2006	8,12
2008/ 2007	10,75
(jun08 a may09) / (jun07 a may08)	14,22

- 1,3 million individual beneficiaries (18% of total)
- belonging to the 6 IESS affiliated operators
- Calculated according to ANS methodology
- company-by-company for 5 main groups of medical procedures

VCMH – Individual plans

US - Example

Percent Annual Increase in National Health Expenditures (NHE) per Capita vs. Increase in Consumer Price Index (CPI), 1980-2007

Source: Kaiser Family Foundation calculations using NHE data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, at http://www.cms.hhs.gov/NationalHealthExpendData/ (see Historical; NHE summary including share of GDP, CY 1960-2007; file nhegdp07.zip), and CPI data from Bureau of Labor Statistics at ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt (All Urban Consumers, All Items, 1982-1984=100, Not Seasonally Adjusted, U.S. city average).

Cost increases - price and frequency

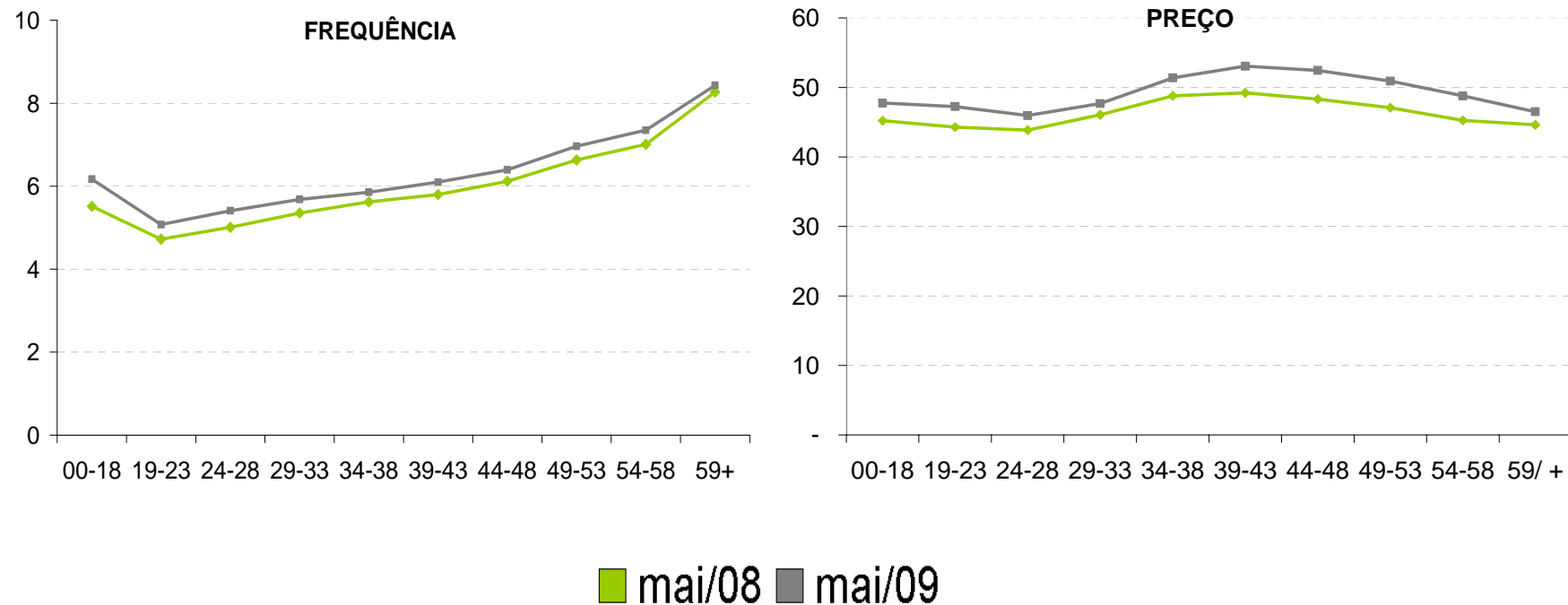|	2007/2006			2008/2007			May09/May08			May 09
	Freq.	Price	Cost	Freq.	Price	Cost	Freq.	Price	Cost	Weights
Visits	-1,7	12,0	10,0	4,2	9,0	13,5	6,3	7,7	14,5	10
Lab exams	2,1	3,3	5,5	7,5	0,9	8,5	7,9	2,8	10,9	18
Therapies	4,7	3,8	8,6	15,9	-1,8	13,1	18,2	-4,2	13,9	4
Hospital.	8,2	-17,5	-10,8	11,7	-1,5	10,0	12,8	1,4	14,4	60

Beaficiaries by age group

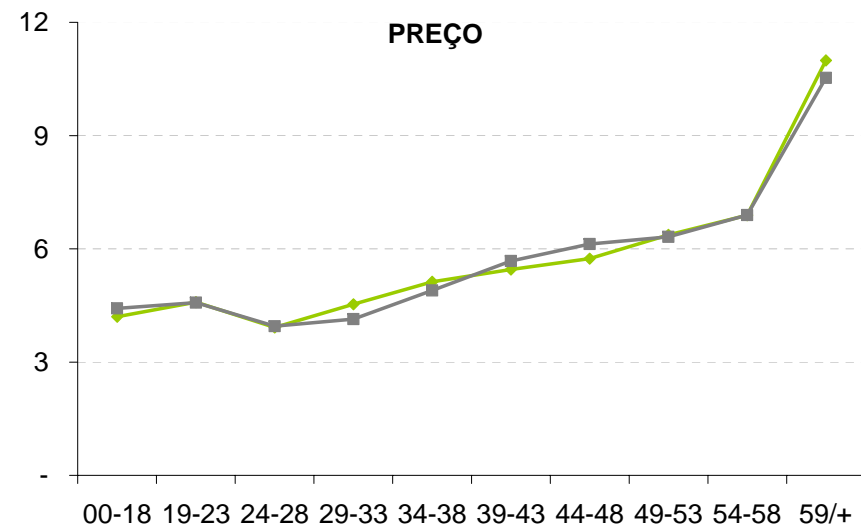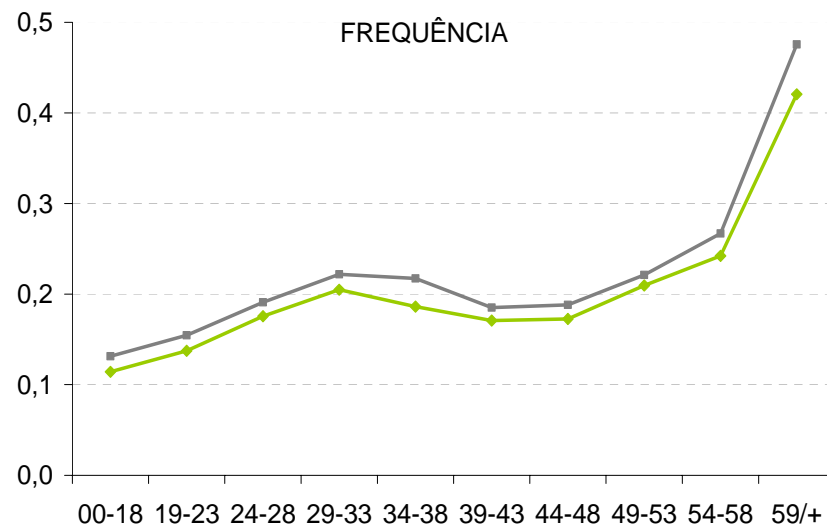|	Old Plans (perchased before 1999)		New Plans	
	mai/08	mai/09	mai/08	mai/09
Total (000)				
00-18	115	95	120	151
19-58	381	339	271	311
59 ou +	170	169	66	77
Total	666	603	457	539
Participation %				
00-18	17,2	15,8	26,3	28,0
19-58	57,2	56,2	59,3	57,7
59 ou +	25,6	28,0	14,4	14,3
Change %				
00-18		(16,8)		25,3
19-58		(10,9)		14,8
59 ou +		(0,9)		17,1
Total		(9,4)		17,9

Frequency and unit price - visits

Doctor visits

Frequency and average price of doctor visits (R$) by age groups (12 months up to may 2009 compared with same period year before)

Frequency and unit price - hospitalization

Hospitalizations

Frequency and average price of hosapitalizatiosn (R$ 000) by age groups (12 months up to may 2009 compared with same period year before)

Frequency – Helth plans x SUS

	IESS	SUS Only
Doctor visits	6,45	1,430
Magnetic Ressonance*	0,19	0,003
Computerized Tomography	0,29	0,018
Hospitalization	0,23	0,075
Hemodinamics*	3,30	1,523
Radiotherapy*	109,81	94,120
Kidney Therapy*	41,08	126,688
Chemotherapy*	69,33	22,918

*average frequency for 1.000 persons
Average 2006-2007 forSUS. Source: DATASUS, IESS.

Perspectives

Perspectives

- Buoyant economy - GDP, employment and earnings
- Competition and consolidation
- Individual x collective plans
- Portability and liberation of price readjustments
- New relationship between private healthcare and SUS
- Quality movement – value for money
- Qualification and accreditation
- Assistance model – operators as health producers
- Regulation of Home care
- Incorporation of Technology
- Aging – old age dependency from 10/100 today to 36/100 in 2050

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