



Brazil Energy Conference
Institute of the Americas

Brazil Oil & Gas

Growth prospects and new regulation

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Lower Hydrocarbon Prices and Tight Credit

- > Lower cash flow generation
- > Investment cuts
- > Leverage increase
- > Alternative source of funds

Summary of Historical Hydrocarbon Prices

	Oil Prices — WTI (\$/bbl)		
	Avg. Price	Max. Price	Min. Price
1997	20.58	26.62	17.60
1998	14.38	17.82	10.76
1999	19.30	27.92	11.37
2000	30.37	37.21	23.90
2001	25.96	32.19	17.45
2002	26.17	32.72	17.97
2003	31.06	37.83	25.24
2004	41.51	56.17	32.48
2005	56.59	69.81	42.12
2006	66.09	77.03	55.81
2007	72.23	98.88	50.48
2008	99.92	145.29	31.41
2009 (YTD)	54.37	72.68	33.98

Bbl – Barrel.

Source: Bloomberg.

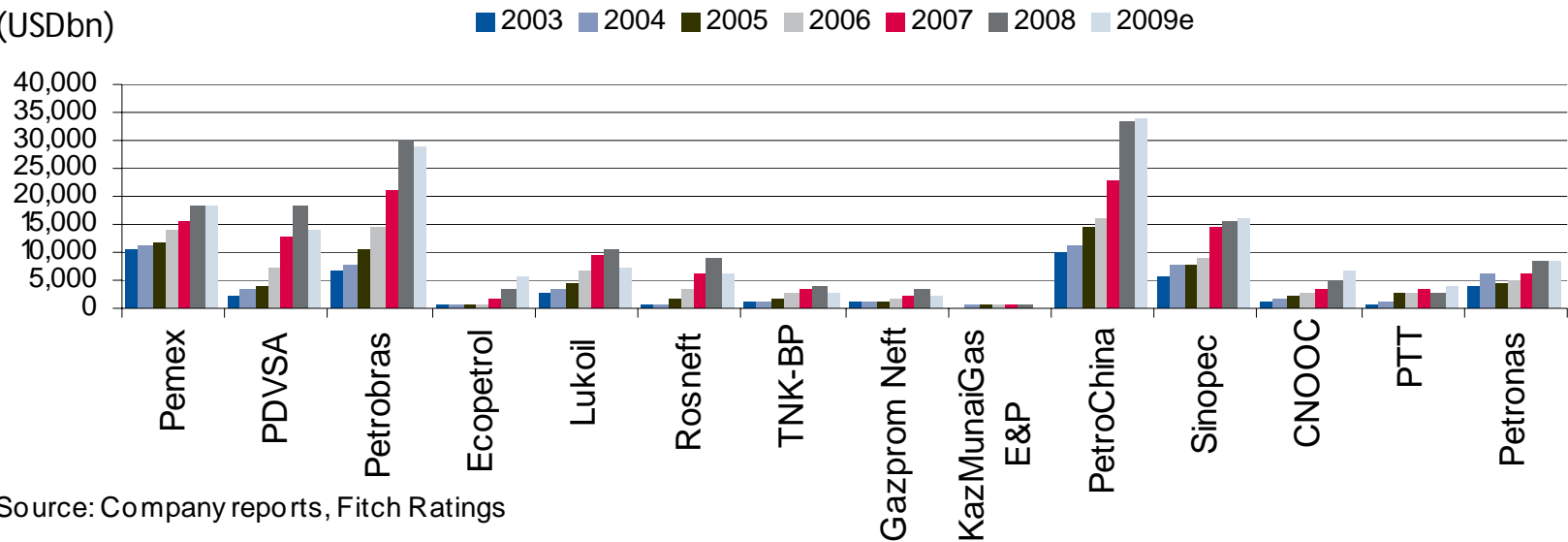


Capital Expenditures to Decline in 2009

Declines in Russia and LatAm partially offset by increases in Asia

Capex 2003-2009

(USDbn)



Source: Company reports, Fitch Ratings



Lower Oil Prices Not Likely to End Nationalism

- > Hydrocarbon related revenues a significant revenue stream for the sovereign
 - **Close to 50% for Venezuela and Malaysia**
 - **About 35% for Mexico, Russia and Kazakhstan**
 - **Less than 20% for China, India, Thailand, Colombia and Brazil**

- > Need to attract capital and technical expertise from IOC to EM at risk
 - **Discouraged by higher royalties and taxes**
 - **Nationalization or coerced sales in Venezuela, Bolivia, Russia and Kazakhstan**

- > Regulatory changes introduce marginal improvements or significant set-backs
 - **Mexico's energy reform improves Pemex's corporate governance & financial flexibility**
 - **Brazil's proposed pre-salt regulation increases government intervention in the industry**



China and State-Owned Banks Finance Sector

Expected Funding Sources in 2009^a

(USD Bil.)

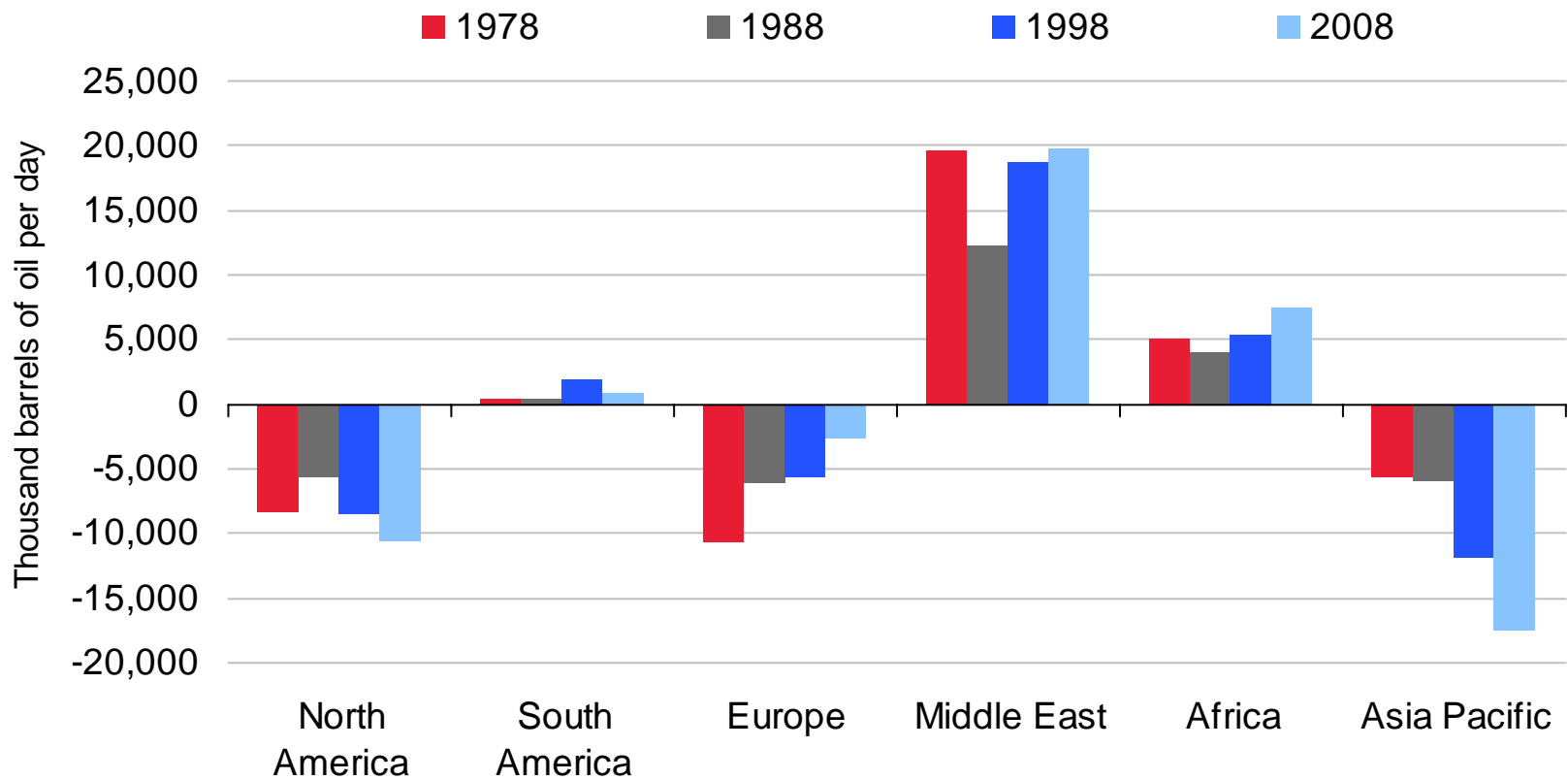
	Pemex 'BBB' Stable	PDVSA 'B+' Stable	Petrobras 'BBB' Stable	Ecopetrol 'BB+' Stable	Lukoil 'BBB-' Stable	Rosneft 'BBB-' Neg.	TNK-BP 'BBB-' Neg.	KMG E&P 'BBB-' Neg.	PetroChina 'A+' Stable	Sinopec 'A-' Stable	CNOOC 'A' Stable	PTT 'BBB' Stable	Petronas 'A' Stable	Total	%
Government Banks	—	—	12.5	—	5.0	3.0	—	—	6.6	5.0	3.5	—	—	35.6	33
China Development Bank	—	4.0 ^b	10.0	—	—	10.0	—	—	—	—	—	—	—	24.0	22
Exim Institutions	1.8	2.0	2.5	—	—	—	—	—	—	—	—	—	—	6.3	6
Domestic Capital Markets	2.5	3.0	—	—	0.8	—	—	—	6.6	—	—	2.6	—	15.5	14
International Capital Markets	2.5	—	2.8	1.5	1.0	—	1.0	—	—	—	—	—	4.5	13.3	12
Other	2.3	—	2.5	1.5	1.2	—	0.6	—	—	5.0	—	—	—	13.1	12
Total	9.0	9.0	30.3	3.0	8.0	13.0	1.6	0.0	13.2	10.0	3.5	2.6	4.5	106.7	100

^aExpected funding sources include incremental debt and refinancing. ^bPDVSA funding sources includes a USD4 billion loan granted by CDB to Banderes (Venezuela's Development Bank), which in turn grants loans to PDVSA.

Source: Fitch Ratings and company reports.



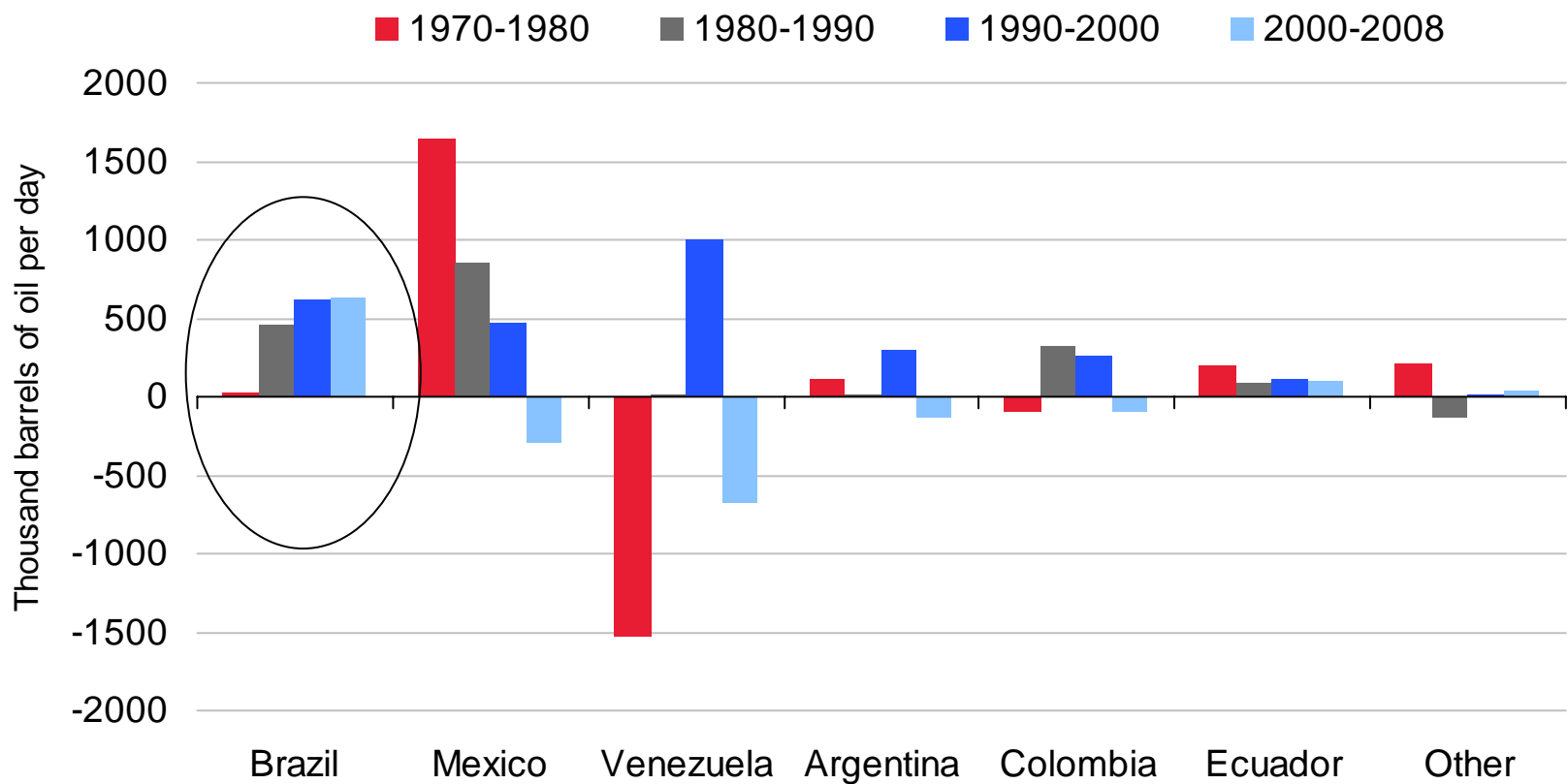
Oil Surplus in Middle East, Africa and South America



Sources: BP and Fitch Ratings



Consistent Production Increases in Brazil

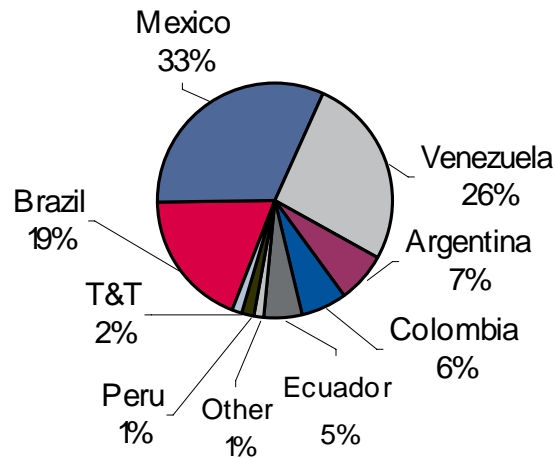


Sources: BP and Fitch Ratings



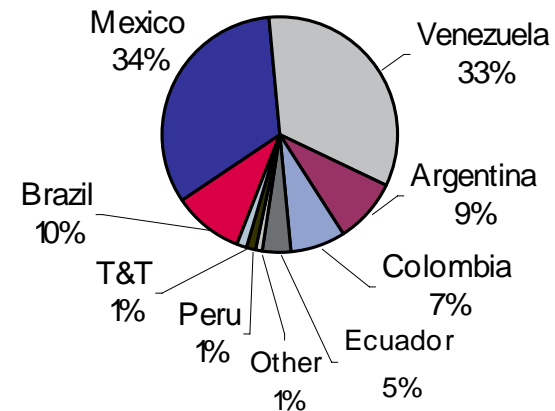
Oil Production in Latin America Shifting to Brazil

2008 Oil Production in Latin America
(9.8 million barrels per day)



Source: BP and Fitch

1998 Oil Production in Latin America
(10.4 million barrels per day)



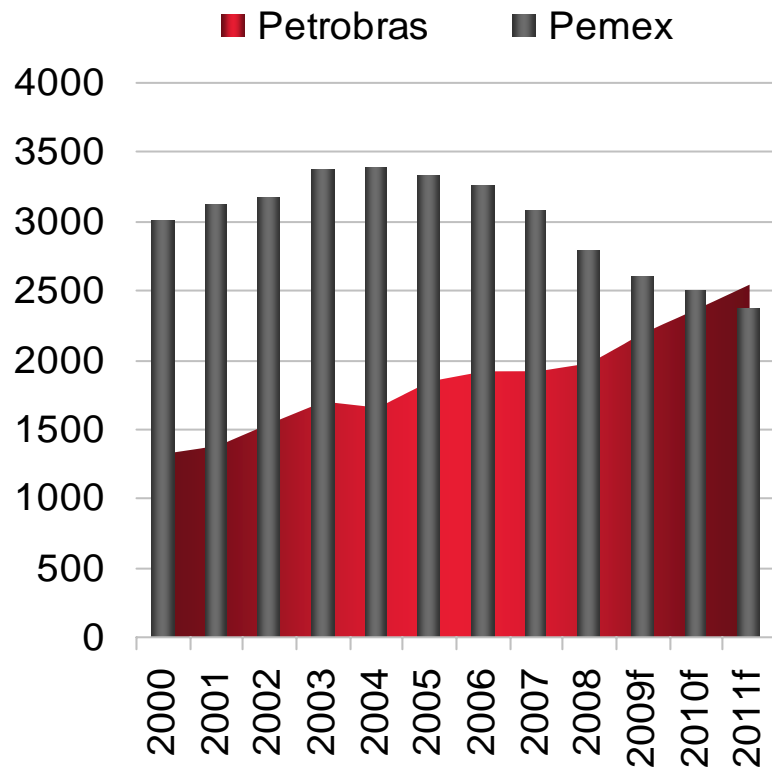
Source: BP and Fitch



Capex Efficiency Diverges Within Regions

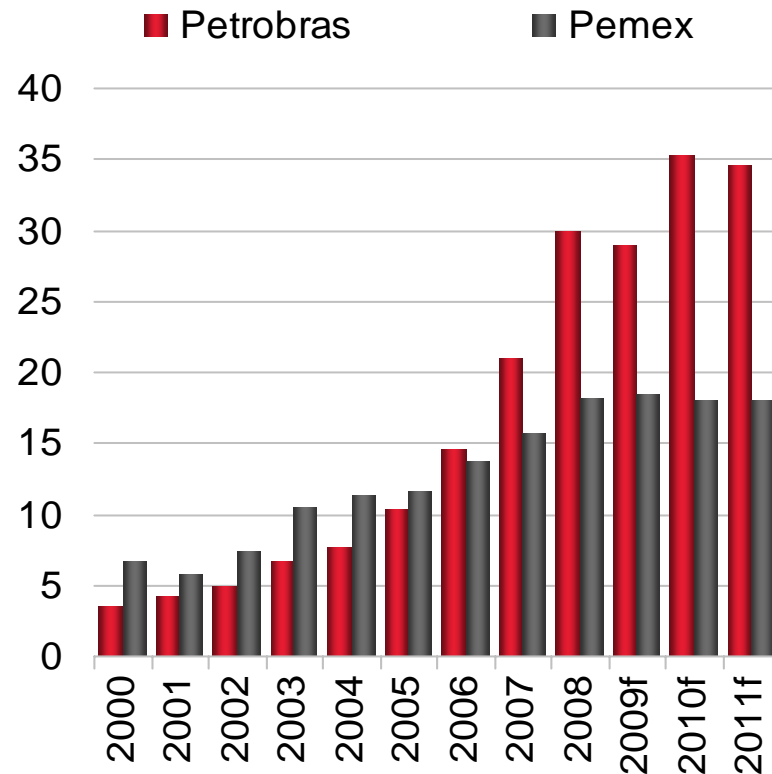
Mexico vs Brazil

Oil Production ('000 Bpd)



Sources: Petrobras, Pemex, Fitch Ratings

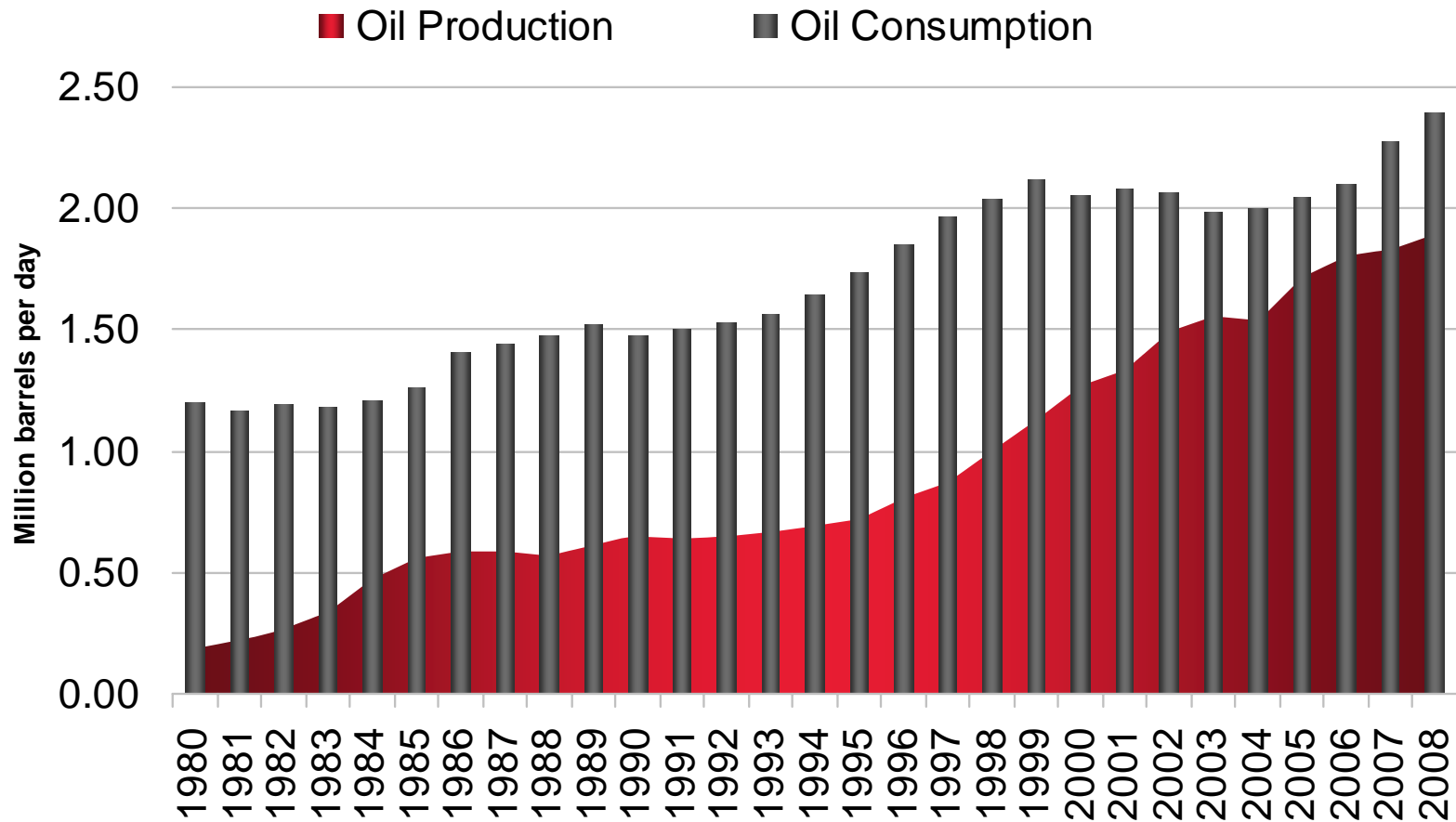
Investments (USD bn)



Sources: Petrobras, Pemex, Fitch Ratings



Brazil: Internal Demand is Robust

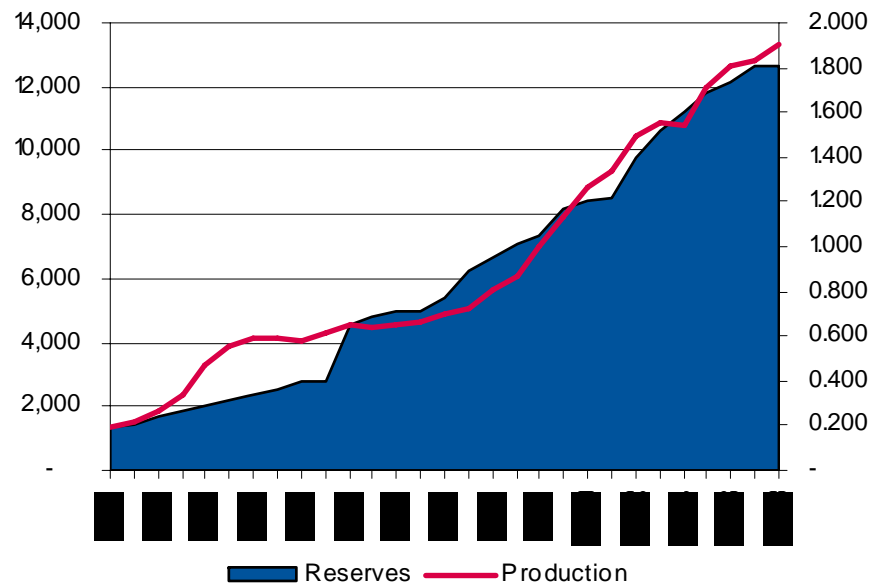


Sources: BP and Fitch



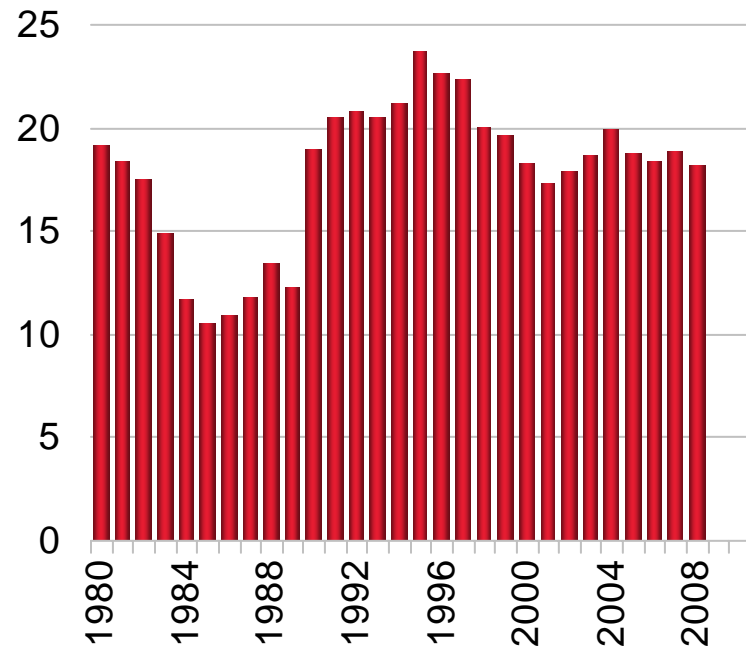
Strong Production, Reserves and Reserve Life Trends in Brazil

Reserves and Production in Brazil
(million barrels)



Source: BP and Fitch Ratings

Reserve Life
(years)





Discoveries Increase Production/Reserve Growth Prospects

- > With the pre-salt areas reserves are expected to more than double in Brazil
 - **5 billion boe to 8 billion boe in Tupi**
 - **3 billion boe to 4 billion boe in Iara**
 - **1 billion boe to 2 billion boe in Guara**

- > Production also could double by 2020 (excluding PSA)
 - **2015E production of 582 mboe (in the pre-salt area)**
 - **2020E production of 1,815 mboe (in the pre-salt area)**

- > Significant investments are required for developing pre-salt (excluding PSA)
 - **USD29 billion from 2009 to 2013 (only pre-salt)**
 - **USD111 billion from 2009 to 2020 (only pre-salt)**



Proposed Regulation Increases Government Intervention

- > Creation of Petrosal
 - Participates in PSA’s operating committees
 - Has veto power

- > Increased attribution of the CNPE
 - Determines areas considered strategic
 - Defines the oil profit paid to the government in areas directly assigned to Petrobras

- > Government may increase stake in the industry
 - “Profit oil” vs royalties and special taxes
 - If minority shareholders do not exercise their pre-emptive rights
 - By buying Petrobras’ shares with treasury notes



Petrobras to Take a More Active Role in the Industry

- > Benefits from proposed regulation:
 - **Operator in all blocks**
 - **30% minimum participation in PSAs**
 - **Government contribution of up to 5 billion boe**
 - **Likely to raise more than USD15 billion from minority shareholders**

- > Burdens from proposed regulation:
 - **Significant investment requirements to develop pre-salt**
 - **Could end up participating in non-economical fields**
 - **Technical and economic challenges**
 - **Resource overextension**



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