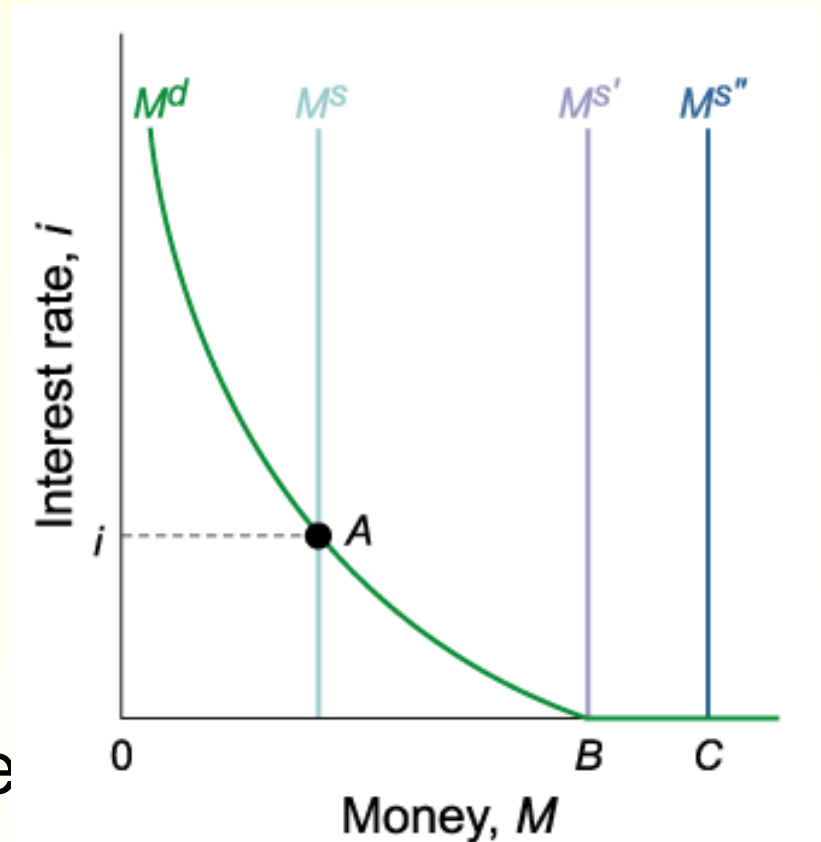




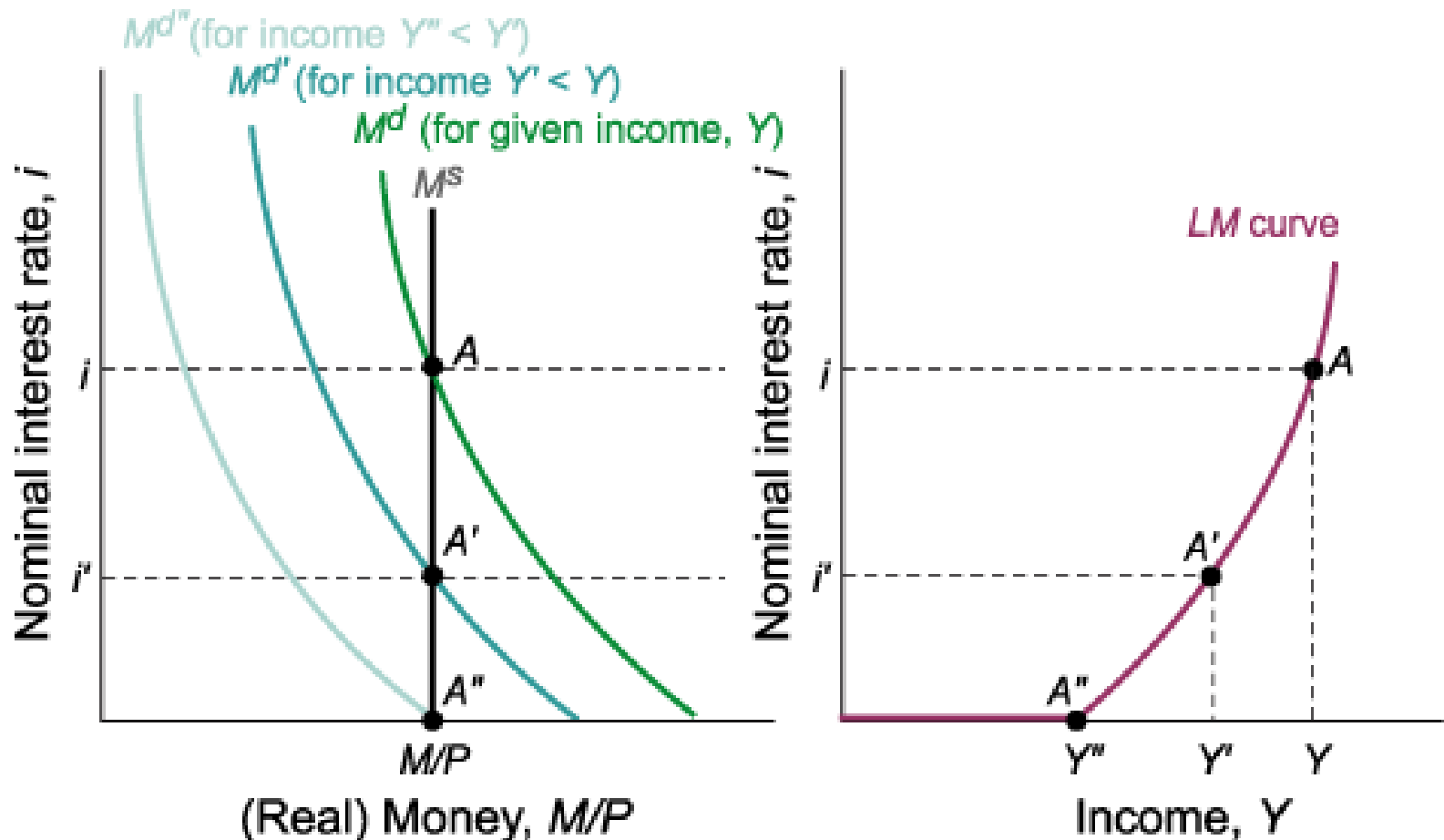
Liquidity Trap

Liquidity Trap

- It describes a situation when expansionary monetary policy becomes powerless.
- In short, nominal interest-rates cannot be negative

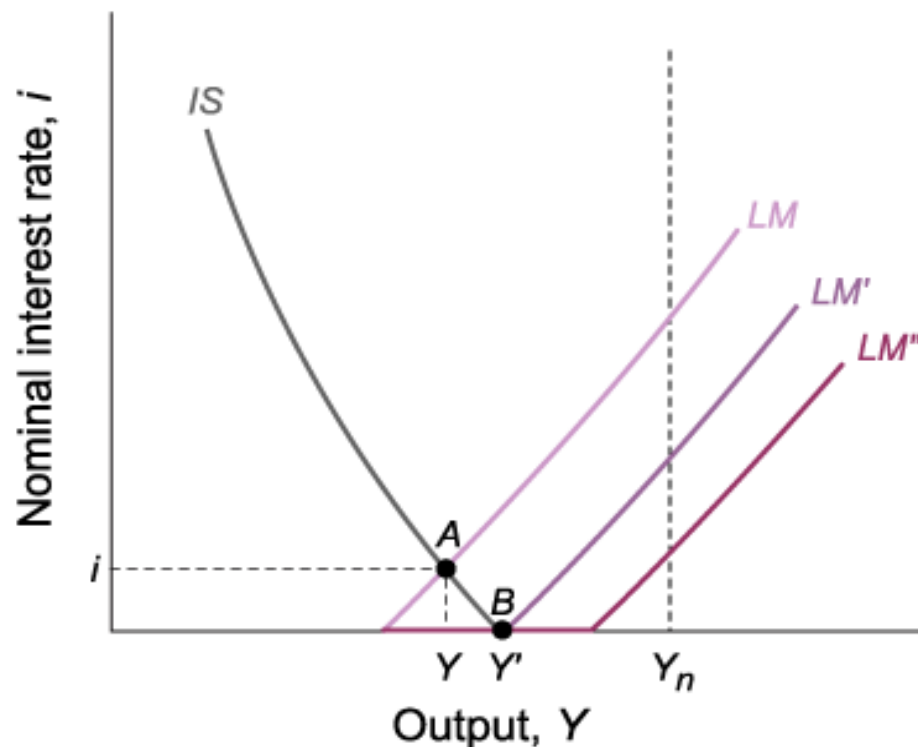


LM and the Liquidity Trap



IS/LM and the Liquidity Trap

- We begin in recession, the bank expands the money supply. This successfully lowers the nominal rate and the real rate, and expands output BUT at B, we have gone as far as we can.

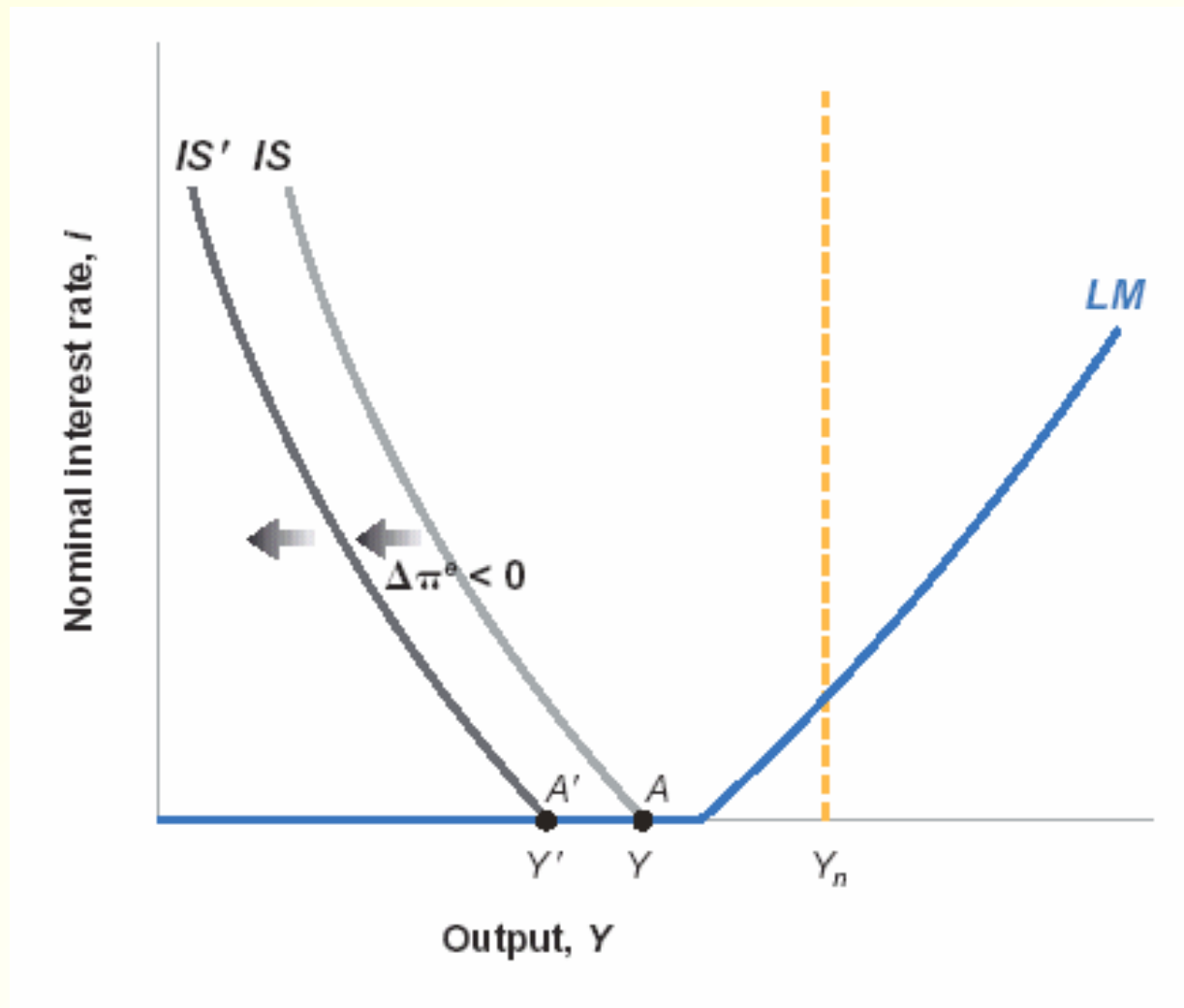





Deflation and the Liquidity Trap

- Now we can see how these two problems combine to turn recessions into slumps or depressions.
- Assume, monetary policy has expanded to reduce the nominal interest-rate to zero. However, this has not been sufficient. Why? Because of the impact of **expected** deflation, shifting the IS leftwards.
- Continuing deflation will continue to raise the real interest rate, making things worse.

Deflation and the Liquidity Trap





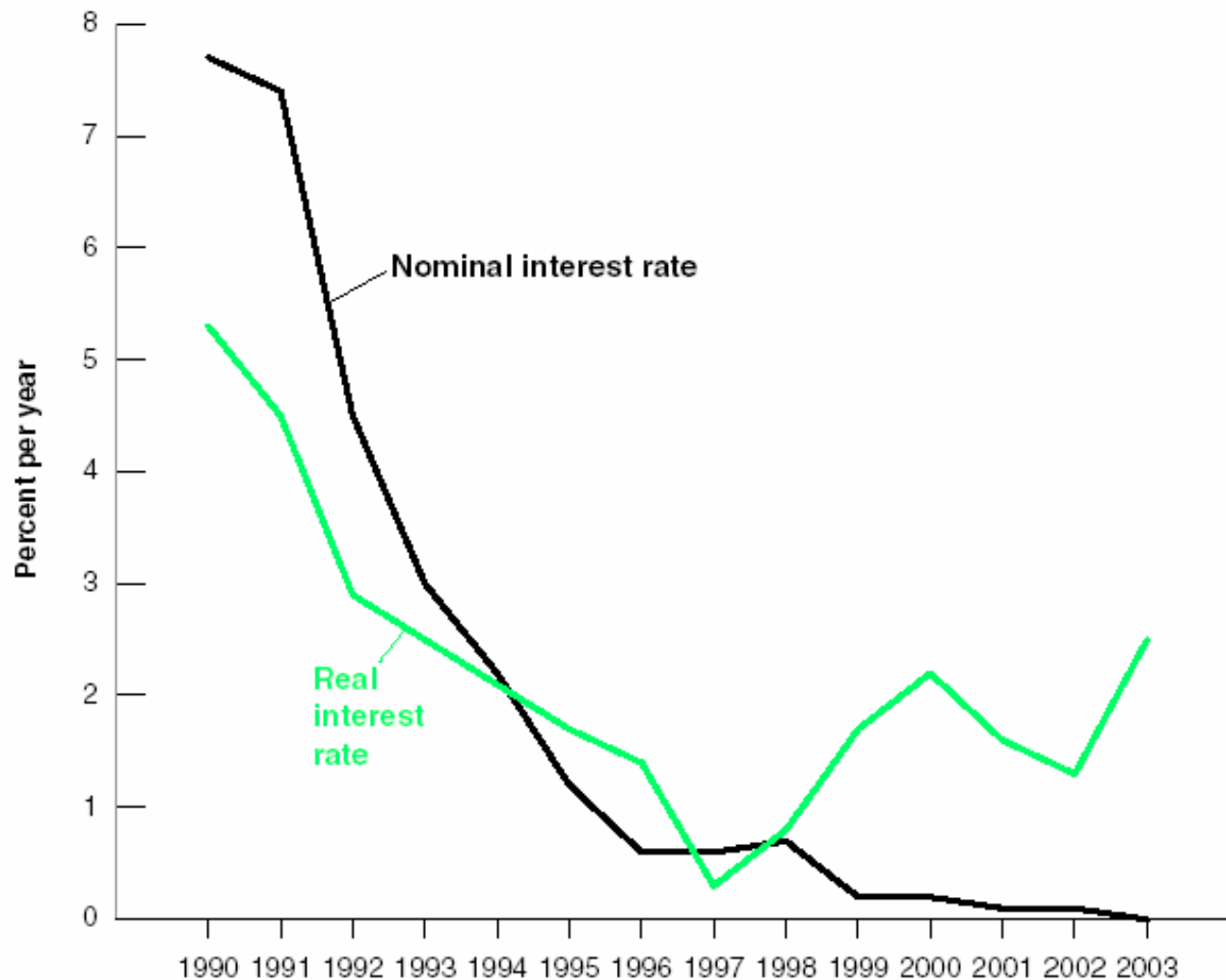
Case Study: Japan

The Japanese slump

Table 22-4 Output Growth, Unemployment, and Inflation, Japan 1990-2001

Year	Output Growth Rate (%)	Unemployment Rate (%)	Inflation Rate (%)
1990	5.2	2.1	2.4
1991	3.4	2.1	3.0
1992	1.0	2.2	1.7
1993	0.2	2.5	0.6
1994	1.1	2.9	0.1
1995	1.9	3.1	-0.4
1996	3.4	3.4	-0.8
1997	1.9	3.4	0.4
1998	-1.1	3.4	-0.1
1999	0.8	4.1	-1.4
2000	2.8	4.7	-1.6
2001	0.4	5.0	-1.6
2002	-0.3	5.4	-1.2
2003	2.7	5.3	-2.5
2004	3.0	5.0	-1.8

Deflation and the Liquidity Trap





Implications for Monetary Policy

- Quick and decisive action
- Non-zero inflation targets



负利率？

- 2016年1月，日本成为首个实施负利率的亚洲国家。
- 其它实施负利率的地区，包括欧元区、瑞典、瑞士、丹麦。