Experiences in Japan: Case of Inflation Indexed Bonds

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First Inflation Indexed Bonds issued in 1742, Massachusetts, USA

STATE of MASSACHUSETTS BAY

No. [redacted]

£454

The FIRST *Day of* JANUARY, A. D. 1780.

IN Behalf of the State of Massachusetts Bay, I the Subscriber do hereby promise and oblige Myself and Successors in the Office of TREASURER of said STATE, to pay unto John Proper or to his Order, the Sum of Four hundred & Fifty four pounds on or before the FIRST Day of MARCH, in the Year of our Lord One Thousand Seven Hundred and Eighty four with Interest at *Six per Cent.* per Annum: Both Principal and Interest to be paid in the then current Money of said STATE, in a greater or less SUM, according as Five Bushels of *CORN*, Sixty-eight Pounds and four-seventh Parts of a Pound of *BEEF*, Ten Pounds of *SHEEPS WOOL*, and Sixteen Pounds of *SOLE LEATHER* shall then cost, more or less than *One Hundred and Thirty Pounds* current Money, at the then current Prices of said ARTICLES—This SUM being THIRTY TWO TIMES AND AN HALF what the same Quantities of the same Articles would cost at the Prices affixed to them in a Law of this STATE made in the Year of our Lord One Thousand Seven Hundred and Seventy-seven, intitled, "*An Act to prevent Monopoly and Oppression.*" The current Prices of said Articles, and the consequent Value of every Pound of the SUM herein promised, to be determined agreeable to a LAW of this STATE, intitled, "AN ACT to provide for the Security and Payment of the Balances that may appear to be due by Virtue of a Resolution of the GENERAL ASSEMBLY of the Sixth of *February* One Thousand Seven Hundred and Seventy-nine, to *this* STATE's Quota of the CONTINENTAL ARMY, agreeable to the Recommendation of CONGRESS, and for Supplying the TREASURY with a SUM of Money for that Purpose." No John Proper

Witness my Hand

Committee

Treasurer

Global Markets for Inflation Indexed Bonds

Country	Issue Date	Index Used
Argentina	1972-89	Non-agricultural wholesale price
Australia	1983-	Consumer prices
	1991	Average weekly earnings
Austria	1953	Electricity prices
Brazil	1964-90	Wholesale prices
	1991-	General prices
Canada	1991-	Consumer prices
Chile	1966-	Consumer prices
Colombia	1967	Wholesale prices
	1995-	Consumer prices
Czech Republic	1997-	Consumer prices
Denmark	1982-	Consumer prices
Finland	1945-67	Wholesale prices
France	1952,1973	Gold price
	1956	Level of industrial production
	1956	Average value of French securities
	1957	Price of equities
Greece	1997-	Consumer prices
Hungary	1995-	Consumer prices
Iceland	1955-	Consumer prices
	1964-80	Cost of building index
	1980-94	Credit Terms Index
	1995-	Consumer prices
Ireland	1983-	Consumer prices
Israel	1955-	Consumer prices
Italy	1983	Deflator of GDP at factor cost
Mexico	1989-	Consumer prices
New Zealand	1977-84	Consumer prices
	1995-	Consumer prices
Norway	1982	Consumer prices
Poland	1992-	Consumer prices
Sweden	1952	Consumer prices
	1994-	Consumer prices
Turkey	1994-97	Wholesale prices
	1997-	Consumer prices
United Kingdom	1975-	Consumer prices
	1981-	Consumer prices
United States	1742,1780	Commodity prices
	1997-	Consumer prices

Source: Deacon and Derry (1998) Table 1.1, p.6.

Note: In addition to government bonds, this table includes issues by public corporations, semi-government authorities, and those that carry a government guarantee.

International Comparisons of Structures in Indexed Bonds

	United States	United Kingdom	France	Italy	Canada	Japan
Time of Introduction	January 1997	March 1981	September 1998	December 2003	December 1991	March 2004
type of CPI	CPI-U (urban CPI)	RPI (Retail Price Index)	CPI (except tobacco), HICP (except tobacco	HICP (except tobacco)	CPI	Core CPI
Linked CPI Lag	three months	three or eight months	three months	three months	three months	three months
Principal Guaranteed	Yes	No	Yes	Yes	No	No
Term Years	5, 10, 20, 30 years	6-50 years	4,10, 15,30 years	5,10,15,30 years	30 years	10 years
Interest Payment Frequency	twice a year	twice a year	once a year	twice a year	twice a year	twice a year
Strips	OK	No	No	OK	No	No
Amount of Issue	US$536.2 billion (¥4830 billion) October 2008	UK £ 157 billion (¥2140 billion) September 2008	Euro 151.3 billion (¥1920 billion) September 2008	Euro 83.7 billion (¥1060 billion) October 2008	CA$31.5 billion (¥340 billion) November 2008	¥1010 billion December 2008

Source: Treasury Department of the United States, Debt Management Office of United Kingdom, the Department of Treasury of Italy, Bank of Canada, Ministry of Finance of Japan and the Bank of Japan (Mizuho Securities)

Issue Records in Japan

Issue	April 2007	June	August	October	December	February 2008	April	June	August
Amount of Issue (billion yen)	5 00	5 00	5 00	5 00	5 00	5 00	5 00	5 00	5 00
Month of Interest Payment	September, March	December June		March, September	June, December		March, September	June, December	
Month of Redemption	March	June		September	December		March	June	
Base Month	December	March		June	September		December	March	

Note: August and February are basically reopen.

Outstanding Amounts

March 2004	March 2005	March 2006	March 2007	December 2007	March 2008	December 2008
0.1	0.9	3.0	5.5	7.9	8.4	9.9

Note: Time is at the end of the month. Billion yen.

Holders of Indexed Bonds

- In UK, 80% are life insurance and pension funds.
- In USA, the major holders are investment (mutual) funds.
- In Japan, 70% are the foreign institutional investors such as pension funds, life insurance and hedge funds.

Why the Japanese Investors are so reluctant to hold indexed bonds?

- Low prospects in future inflation.
- Public pension funds are not afraid of inflation because inflation risk can be hedged by increases in tax revenue.
- Institutional investors are reluctant to introduce new operation and accounting system that can handle indexed bonds.
- Market liquidity is still low.

Future Prospects

- In the long run, inflation indexed bonds will be included in the portfolio of annuity products.
- In order to be recognized as one of the most useful inflation hedging instruments, the Government has to advertize the inflation indexed bonds more extensively and perhaps to provide a special tax incentive.