History and Theories of Yield Curve Control

Keynote Speech at the Financial Markets Panel Conference to Commemorate the 40th Meeting

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Chart 1

Keynes' Open Letter to President Roosevelt



"I put in the second place the maintenance of cheap and abundant credit and in particular the reduction of the long-term rates of interest. ... I see no reason why you should not reduce the rate of interest on your long-term Government Bonds to 2½ per cent or less with favourable repercussions on the whole bond market, if only the Federal Reserve System would replace its present holdings of short-dated Treasury issues by purchasing long-dated issues in exchange. Such a policy might become effective in the course of a few months, and I attach great importance to it."



The Interest Rate Cap Policy in the U.S.

Chart 3

The Government Bond Price-supporting Policy in the U.K.



The 1951 "Accord" in the U.S.

-- 1951 Accord --

"The Treasury and the Federal Reserve System have reached full <u>accord</u> with respect to debtmanagement and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government's requirements and, at the same time, to minimize monetization of the public debt." Changes in Monetary Policy after the Accord

	Before Accord	After Accord
Policy Implementation	• Maintain the cap of the bond yield	• Stabilize prices
Involvement in Government Bond Market	 Purchase the short-term government bonds at a specific rate Maintain the cap of the long-term bond yield 	 Bills Only Policy Interest rate structure is formed by market forces
Balance Sheet	• Shift from the gold reserve to the government bond holding	• Keep holding mainly the government bonds at the same amount

Sources: Federal Reserve; U.S. Department of the Treasury.

Chart 5

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Controversy on Effectiveness of Operation Twist in the U.S.



Note: The long-term interest rate is the average of 10-year and over 10-year U.S. Treasury bond yields, and the short-term interest rate is the Treasury Bill rate (3-month). Sources: HAVER; Government of the United States. 5

Chart 6

The Era of Monetary Targeting and the Shift to Short-Term Interest Rate Control

	United States/FRB	Euro area/ECB	United Kingdom/BOE	
	Monetary targeting	((West) Germany/Bundesbank)	Monetary targeting	
1970s	 Statement in the directive of the desire to moderate growth in money and bank credit (1970) Announcement of the growth ranges for M1, M2, M3, and bank credit (1975) Humphrey-Hawkins Act passed (1978) Adoption of the growth targets for M1, M2, M3, and bank credit (1979) Adoption of comborsourced according 	Central bank money stock targeting (1974–)	• M3 targeting (1976)	
1980s	 Adoption of nonborrowed reserve targeting (1979–1982) Lapse of the growth target of M1 (1987) 	• M3 targeting (1988–)	 M0 and M3 targeting (1984–) Lapse of M3 targeting (1987) 	
1990s 2000s	 Chairman's testimony concerning the downgrading of M2 (1993) Monetary policy without any nominal anchor based on FF rate control Announcement of the FF rate target (1995) 	 Extension of the time horizon for monetary targeting to two years (1996) Start of ECB (June 1998–) Stability-oriented Two-Pillar Strategy Adoption of Two-Pillar Strategy (1999–) 	Policy implementation focusing on exchange rate stability • United Kingdom joined the ERM (1990) • United Kingdom left the ERM (1992) Inflation targeting • Adoption of Repo Rate as the policy rate (1997) • The monitoring ranges for M0 and M4 lapsed (1997)	
		Global Financial Crisis (2008)		
Sources Deale of Lance "The Dele of the Manay Steele in Conducting Monetary Delicy," Back of Lance Quarterly Pullatin Mar 2002 - 1-				

purce: Bank of Japan, "The Role of the Money Stock in Conducting Monetary Policy," Bank of Japan Quarterly Bulletin, May 2003, etc.

Chart 7

Conventional Monetary Policy and Unconventional Monetary Policy

Conventional Monetary Policy	• Control of Short-Term Interest Rates (0% or Higher)	
Unconventional Monetary Policy	• Purchases of the Long-Term Government Bonds (Quantitative Easing)	
	• Credit (Qualitative) Easing	
	• Forward Guidance	
	• Negative Interest Rate	



Note: The graph shows the median of the estimates reported in existing studies in each country and region. Source: Joseph E. Gagnon, "Quantitative Easing: An Underappreciated Success," *Policy Brief*, PB16-4, Peterson Institute for International Economics, 2016.

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Chart 9

Reassessment of the Effects of Operation Twist

Swanson (2011)

- [Data Frequency]
- Daily (high frequency)
- [Methodology]
- Examines if the movement of the interest rate after the announcement of Operation Twist is significantly different from the its past movements



Modigliani and Sutch (1966)

- [Data Frequency]
- Quarterly (low frequency)
- [Methodology]
- Examines if the model of the yield spread without considering the effects of Operation Twist is able to correctly forecast the actual value of the yield spread during Operation Twist



Note: The graphs are shown for illustrative purposes and do not coincide with the actual numbers documented in the papers.

Sources: Eric T. Swanson, "Let's Twist Again: A High-Frequency Event-Study Analysis of Operation Twist and Its Implications for QE2,"

Brookings Papers on Economic Activity, Spring, 2011, pp. 151-188; Franco Modigliani and Richard Sutch, "Innovations in Interest Rate Policy," American Economic Review, Vol. 56, No. 1/2, 1966, pp. 178-197.

Issues for Discussion

✓ Controllability of the long-term interest rate

✓ Future of the monetary policy: normal vs crisis?

 \checkmark Desirable shape of the yield curve

 \checkmark Relationship with fiscal management