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GOVERNMENT POLICY BLUNDERS LARGELY CAUSED THE GLOBAL FINANCIAL CRISIS

Macroeconomic and microeconomic policy blunders by both the U.S. government and foreign governments inflated an unsustainable housing bubble in the United States and other developed economies. When this bubble inevitably popped, a global financial crisis ensued. Although misaligned private incentives, methodological errors in rating structured credit products, and the recklessness of some private financial institutions and investors did play a contributory role in the recent financial turmoil, individuals and firms could not have created and sustained such a large housing bubble over so long a time without major macroeconomic and microeconomic policy mistakes. These policy mistakes were:

1. The exchange rate policy of the People's Republic of China (PRC) and the shadow exchange rate policies of governments in other Asian economies caused large and persistent international trade imbalances, suppressed price increases on tradable goods and services, and channeled monetary inflation in the United States and other developed countries with floating exchange rates disproportionately into housing prices;
2. The Federal Reserve pursued, at least in retrospect, an overly accommodative monetary policy after 2000 that kept U.S. interest rates too low for too long. Moreover, central banks in the PRC and other Asian economies invested most of their surging foreign exchange reserves in U.S. Treasury, Fannie Mae, and Freddie Mac debt securities, flattening the long-end of the yield curve in the United States. These policies combined to produce extremely low long-term interest rates that stimulated housing demand.
3. Financial regulators in the United States and other developed economies failed to exercise

adequate prudential supervision over highly leveraged non-depository financial institutions in the alternative financial system;

4. Regulations mandating the use of value-at-risk models to determine the capital adequacy of financial institutions (1) caused both these institutions and their regulators to underestimate risk exposure, and (2) encouraged these institutions to increase their leverage;
5. Regulations mandating the use of "fair value" accounting (also known as "mark-to-market" accounting) for illiquid financial assets exacerbated liquidity problems at financial institutions after the housing bubble burst.
6. The strengthening of affordable housing regulations governing Fannie Mae and Freddie Mac in October 2000 had the unintended consequence of creating a large regulatory-induced demand for subprime residential mortgage loans that mortgage banks proceeded to satisfy.¹

Macroeconomic Policy Factors. During the last decade, the governments of the world's major economies have pursued two different exchange rate policies: freely floating exchange rates and pegged exchange rates. In the "floating zone," the United States along with Australia, Canada, the European Union member-states using the euro, and the United Kingdom allowed market forces to determine the foreign exchange value of their currencies. In the "pegging zone," the People's Republic of China (PRC), Indonesia, India, Japan, South Korea, Malaysia, Taiwan, and Thailand intervened heavily in the foreign exchange market by buying dollars and selling their currencies to maintain politically determined, below market exchange rates pegged to the U.S. dollar to give

their manufactured exports a price advantage in American and European markets.

Pegged exchange rates produced persistent distortions in relative prices around the world. Over time, these price distortions exacerbated imbalances in the global economy, especially large, persistent current account surpluses in the PRC and large, persistent current account deficits in United States.

Consequently, the governments of these Asian economies added \$2.7 trillion to their foreign exchange reserves between December 31, 2000 and December 31, 2007. About 70 percent of this increase in foreign exchange reserves was invested in the United States, mostly in U.S. Treasury debt securities and U.S. Agency debt securities (e.g., Fannie Mae and Freddie Mac).

The exchange rate-induced price distortions influenced macroeconomic policy decision-making around the world. In the United States and other economies in the floating zone, central banks pursued, at least in retrospect, overly accommodative monetary policies that expanded the availability of credit at low interest rates. In turn, these policies inflated unsustainable housing price bubbles. In the PRC and some other economies in the pegging zone, macroeconomic policy errors caused price inflation in goods and services to surge.

After these housing bubbles popped, massive overinvestment (i.e., the accumulation of assets in excess of the demand for these assets) and malinvestment (i.e., the accumulation of the wrong types of assets) was revealed in the housing sectors of the United States and most of the other major economies in the floating zone. This triggered a global financial crisis that began on August 9, 2007.

Specifically:

1. Low-cost imports, especially labor-intensive manufactured goods from the pegging zone, intensified competition for tradable goods in the United States and other economies in the floating zone. Because of this competition, various indices used to measure changes in the prices of goods and services registered very low inflation rates in the United States and other economies in the floating zone.

2. Low reported inflation rates persuaded officials at the Federal Reserve and other central banks to pursue relatively accommodative monetary policies throughout most of the last decade.
3. Because asset prices are generally excluded from inflation indices, higher housing prices did not increase reported inflation rates and did not trigger more restrictive monetary policies in the United States or other economies in the floating zone.
4. At least in retrospect, the Federal Reserve and other central banks in the floating zone pursued overly accommodate monetary policies during most of the last decade. This fed a rapid expansion of credit relative to GDP. In the United States, total credit outstanding (including total debt securities outstanding in U.S. credit markets and total loans and leases outstanding at U.S. depository institutions) grew from \$17.1 trillion (equal to 205.8 percent of GDP) on December 31, 1997 to \$38.3 trillion (equal to 276.8 percent of GDP) on December 31, 2007.
5. Central banks in the pegging zone invested a large portion of their accumulation of foreign exchange reserves in medium- and long-term U.S. Treasury debt securities and U.S. Agency debt securities. These investment decisions flattened the yield curve in the United States, pushing medium- and long-term U.S. interest rates below what they would have otherwise been. Of course, the housing sector is especially sensitive to changes in long-term interest rates.

Microeconomic Policy Factors. During the last three decades, an alternative financial system has developed to the traditional bank-centric financial system. This alternative system is based on (1) the securitization of loans, leases, and receivables into structured credit products (e.g., residential mortgage-backed securities), and (2) the purchase of these structured credit products by highly leveraged non-depository financial institutions (e.g., investment banks, financial government-sponsored enterprises including Fannie Mae and Freddie Mac, hedge funds, and off-balance sheet entities).

Highly leveraged non-depository financial institutions now perform the same economically vital, but inherently risky functions of (1) intermediation² and (2) liquidity and maturity transformation³ that banks, savings institutions, and credit unions have historically performed. In the United States at the end of 2007, highly leveraged non-depository financial institutions held \$12.7 trillion of financial assets compared with \$13.5 trillion of financial assets in depository institutions.

However, this alternative system, which developed largely outside of the regulatory and supervisory structure that has been necessary to contain financial contagion, proved vulnerable to a modern version of 19th century bank runs. Instead of depositors “running” to banks to withdraw their deposits, unleveraged financial institutions such as money market mutual funds that lose confidence in highly leveraged non-depository financial institutions (e.g., Bear Stearns) refuse to rollover their overnight repurchase agreements while banks curtail their secured lines of credit, forcing such troubled institutions to either declare bankruptcy or seek government assistance in a matter of hours.

Unintended Consequences from Financial Regulations. Federal regulatory policies that addressed legitimate problems (i.e., inconsistent capital regulations for multinational banks, and inadequate accounting standards that allowed Enron to conceal its true financial condition before its collapse in 2001) had the unintended consequences of encouraging excessive leverage and risk-taking especially among these highly leveraged non-depository financial institutions. In particular, two policies encouraged financial institutions to behave pro-cyclically:

1. Promoting the use of value-at-risk models to determine the risk exposure in financial institutions without sufficient consideration of the inherent limitations in these models, especially the lack of sufficient historical data to draw statistically valid conclusions about (a) the credit performance of new products, and (b) institutional liquidity under rare episodes of financial stress; and
2. Requiring financial institutions to use fair value (also known as mark-to-market) accounting for illiquid financial assets that such institutions intend to hold.

Reliance on value-at-risk models caused both financial institutions and their regulators to underestimate the risk exposure at these institutions. This underestimation encouraged aggressive lending and underwriting practices at financial institutions during upswings.

Small changes in the price factors that econometric models use to estimate the fair value of illiquid financial assets can cause large drops in the recorded value of these assets during downturns, forcing financial institutions to take large write-downs. These write-downs can trigger “fire sales,” in which financial institutions rush to sell similar financial assets at any price, possibly reducing the value of these assets well below what they actually fetch during orderly sales. Widespread illiquidity may force financial institutions to contract the availability of credit and increase its cost.

Unintended Consequences from Housing Policies Promoting Home Ownership. The shift from FHA-insured mortgage loans to subprime mortgage loans among low income households in the United States and the widespread issuance of subprime mortgage-backed securities by investment banks during the first half of this decade is, in large part, the unintended consequence of well-meaning, but poorly conceived federal policies to increase the home ownership rate among low income households. On October 31, 2000, the U.S. Secretary of Housing and Urban Development issued affordable housing regulations for Fannie Mae and Freddie Mac during the years 2001 to 2004. These regulations significantly increased the goals at Fannie Mae and Freddie Mac for purchasing residential mortgage loans to low income households. To meet these goals, Fannie Mae and Freddie Mac stepped-up their purchases of privately issued AAA-rated tranches of subprime mortgage-backed securities beginning in 2001. Responding to this regulatory-induced demand, mortgage banks greatly increased their extension of subprime mortgage loans, while investment banks placed these loans into subprime mortgage-backed securities.

Misaligned Private Incentives. Misaligned private incentives encouraged excessive risk-taking in financial institutions:

1. Unlike the originators of other loans, leases, or receivables, the originators of residential

mortgage loans were not required to retain an equity interest, known as “skin in the game,” in (a) the loans which were sold or (b) the mortgage-backed securities into which these loans were placed. Thus, originators such as mortgage banks had no incentive to apply sound credit standards when underwriting residential mortgage loans.

2. The “issuer pays” business model of credit rating agencies made them financially dependent upon a few investment banks whose structured credit products the agencies were assessing. These agencies pressed their analysts to give favorable ratings to maintain or increase market share with these banks.
3. Banks had “up-front” incentive compensation packages for investment bankers that did not adjust their compensation for the long-term profitability of their deals for the banks or their customers.

Methodological Errors. Credit rating agencies employed flawed methodologies to evaluate structured credit products. These methodologies did not fully account for the likely correlation of delinquency and default rates for similar loans, leases, and receivables that constitute the collateral in structured credit products. This error caused credit rating agencies to give higher ratings to many structured credit products than they deserved.

Conclusion. Macroeconomic policy errors both here and abroad combined with regulatory policy deficiencies and misaligned private incentives to inflate unsustainable bubbles in housing prices in the United States and most of the other major economies in the floating zone. After these bubbles popped, the alternative financial system proved vulnerable to a modern version of 19th century bank runs. This sparked a global financial crisis that is ongoing.

¹ For more detailed analyses, see: Robert P. O’Quinn, *Chinese FX Interventions Caused International Imbalances, Contributed to the U.S. Housing Bubble*, Prepared for the Joint Economic Committee (110th Cong., 2nd sess., March 2008); Robert P. O’Quinn, *The U.S. Housing Bubble and the Global Financial Crisis: Housing and Housing-Related Finance*, Prepared for the Joint Economic (110th Cong., 2nd sess., May 2008); and Robert P. O’Quinn, *The U.S. Housing Bubble and the*

Global Financial Crisis: Vulnerabilities of the Alternative Financial System, Prepared for the Joint Economic Committee (110th Cong., 2nd sess., June 2008).

² Intermediation refers the economic function of channeling funds from savers to borrowers.

³ Liquidity and maturity transformation refers to the economic function of turning illiquid financial assets such as term loans to households and firms into liquid financial assets such as deposits payable on demand or marketable securities.