CUMBERLAND ADVISORS®

All Financial Crises Are Not Alike

Robert Eisenbeis, Ph.D.

Vice Chairman & Chief Monetary Economist

Bob.Eisenbeis@Cumber.com

Panel on Post-Crisis Financial Reform in the US and Europe
80th Meeting of the International Atlantic Economic Society
Boston, MA
October 10, 2015

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Three Important Differences

- Consider the Three Big Financial Crises
  - Great Depression
  - Thrift Crisis
  - Great Recession
- Three Important Differences
  - Macro and Related Policy Dimensions
    - Short term policy responses differed
  - Different systemic risks and patterns of financial institution failures.
  - Longer term policy responses were directed towards different perceived problems and driven by different theories of the functioning of financial institution markets and institutions

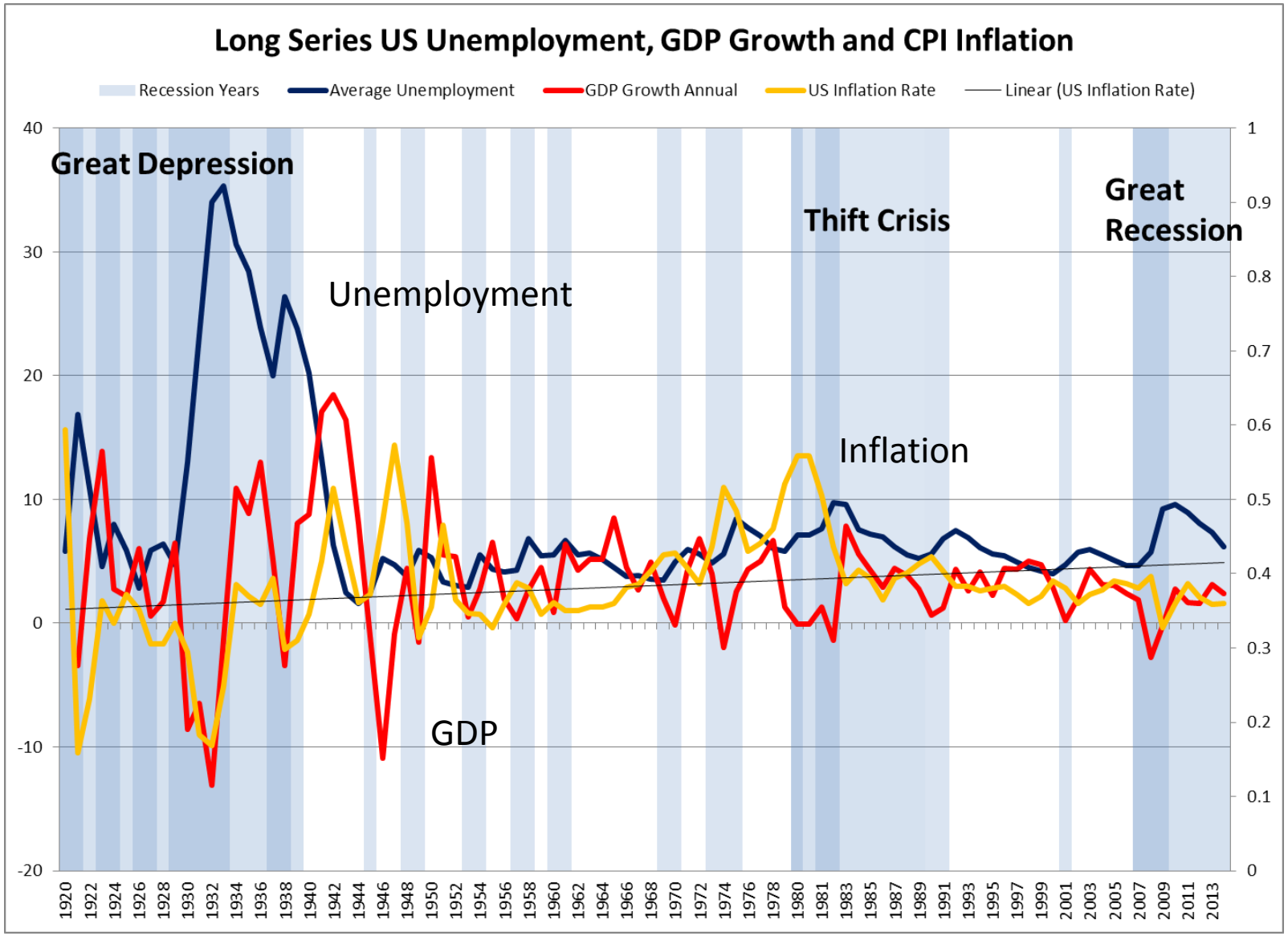
©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

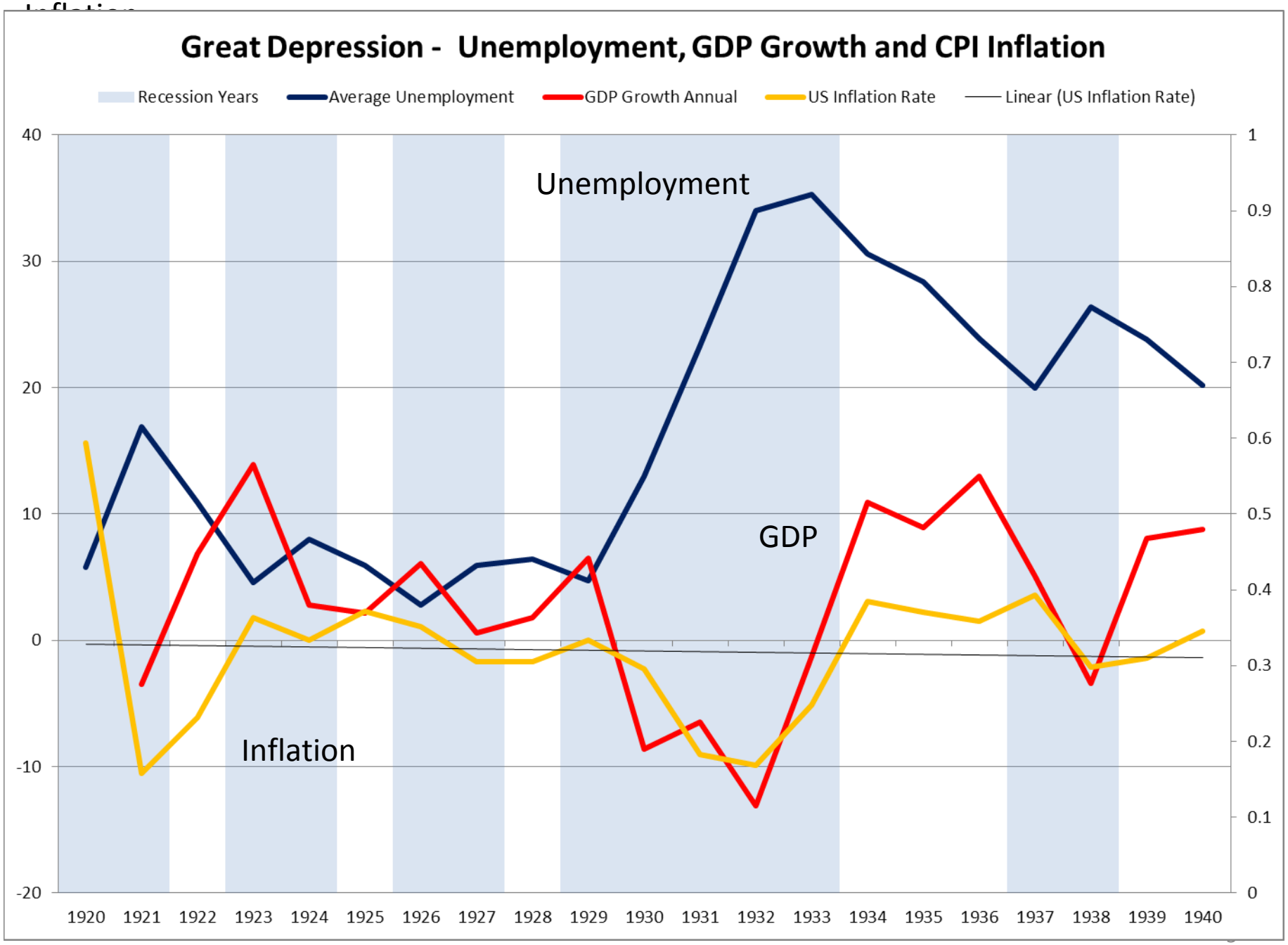
Macro Economic and Policy

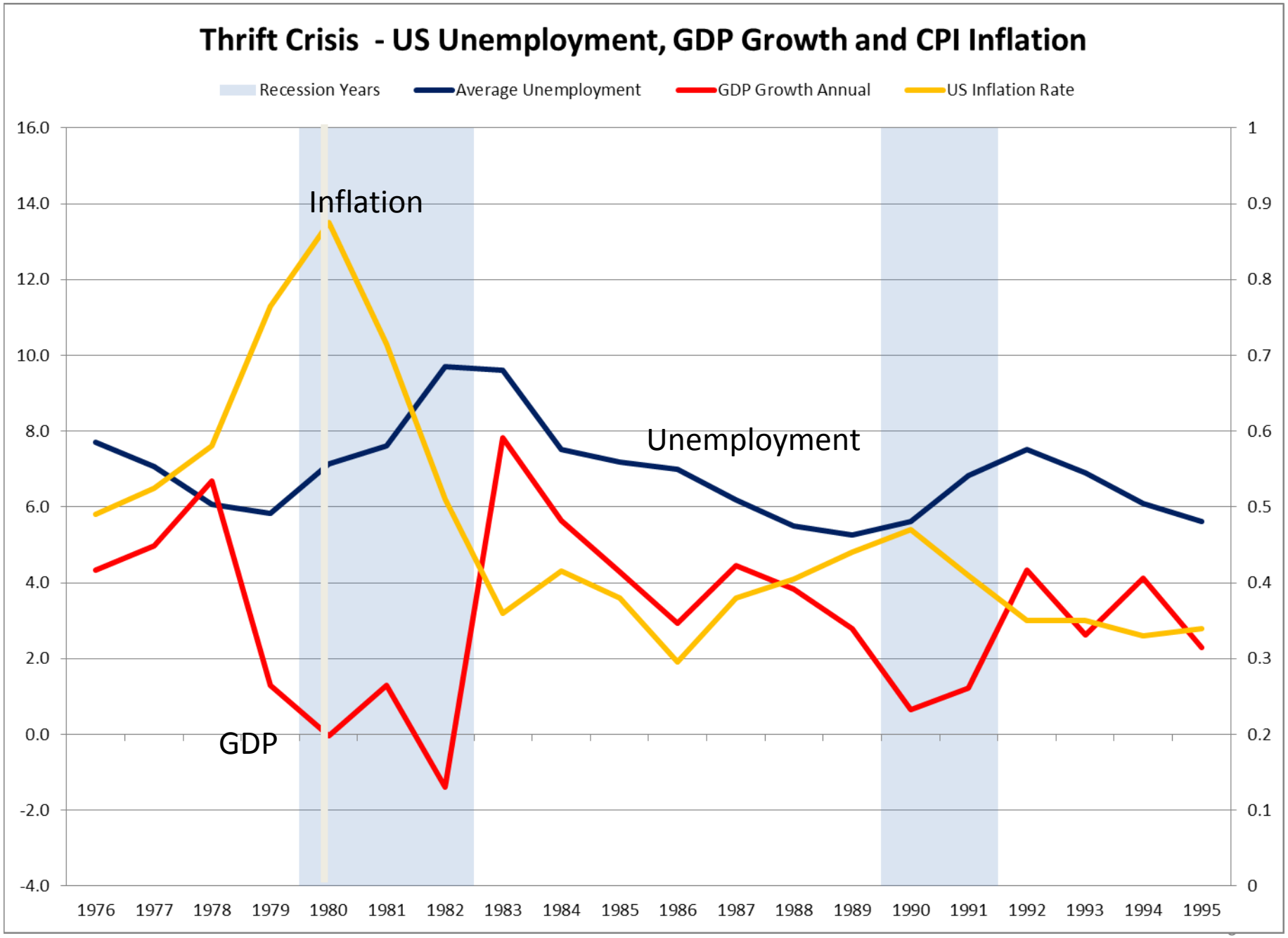
- Great Depression was postwar environment
- Thrift crisis was heavily driven by inflation, attempts to stem inflation and the regulatory environment
- Great Recession was first and foremost an unintended government housing policies

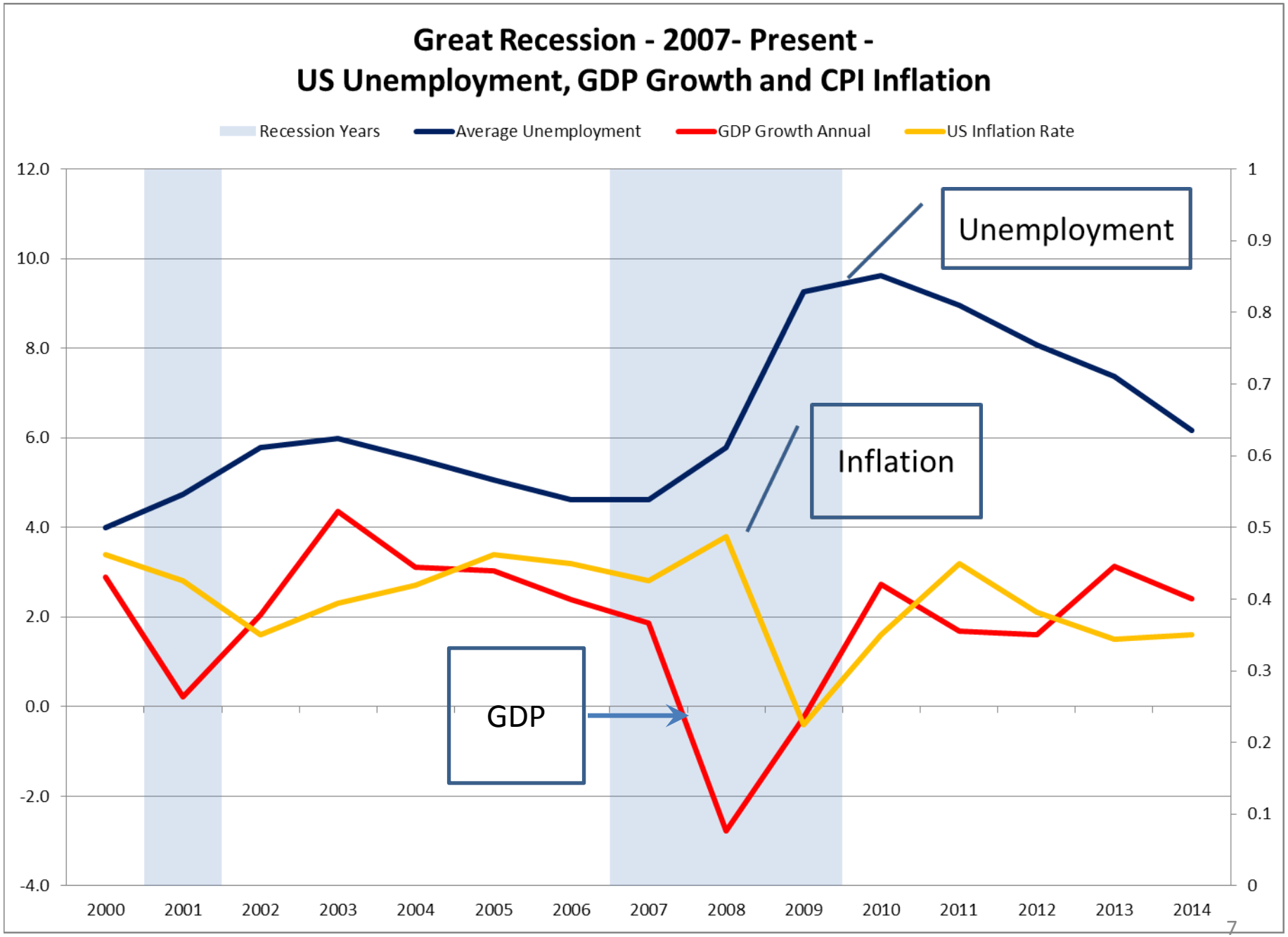
©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Macro Policy and Economic Environment




Great Depression - Unemployment, GDP Growth and CPI Inflation
Recession Years
Average Unemployment
GDP Growth Annual
US Inflation Rate
Linear (US Inflation Rate)
Unemployment
GDP
Inflation
40
30
20
10
0
-10
-20
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940


Thrift Crisis - US Unemployment, GDP Growth and CPI Inflation
Recession Years
Average Unemployment
GDP Growth Annual
US Inflation Rate
Inflation
Unemployment
GDP
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995


Great Recession - 2007- Present -
US Unemployment, GDP Growth and CPI Inflation
Recession Years
Average Unemployment
GDP Growth Annual
US Inflation Rate
12.0
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Unemployment
Inflation
GDP

Short Term Policy Responses

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Short Term Responses to the Great Depression

- The Fed's overall response to the 1929 stock market crash and Great Depression was rather anemic
  - In 1929 the NY Fed lowered the discount rate and lent freely to money center banks independently from the Board in DC
  - Discount lending increased as did open market purchases, but were quickly reversed as each shock dissipated
  - The Fed sat passively by as gold flowed into the country after the UK abandoned the gold standard

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Short Term Responses to the Thrift Crisis

- Unlike the Great Depression and the Great Recession, fallout during the thrift crisis was prolonged
- Much of the focus was on protecting thrifts from disintermediation by selectively relaxing deposit rate ceilings permitting banks and thrifts to pay more market rates on the most interest sensitive sources of funds while preserving the thrift/bank differential
- Treasury imposed a $10,000 minimum size on Treasury obligations
- Asset powers of thrifts were expanded in an attempt to enable them to diversity and to grow their way out of their problems
- NOW accounts were authorized to permit the payment of interest on transaction accounts

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Short Term Policy Responses- The Great Recession

- Not only were the macro economic conditions leading up to the Great Recession different from those preceding both the Great Depression and the recession and thrift crisis of the 1980s, but also the short term policy responses to the liquidity problems experienced in the highly leverage asset backed commercial paper market and subprime mortgage market in the Great Recession were unique.
- The Fed cut the discount rate in response to the initial signs of a liquidity problem in wholesale money markets in Sept 2007 when the TED spread widened from 25 to 237 bp.
- When Lehman Brothers failed followed by Freddie and Fannie, in the fall of 2008, the Fed still viewed the problem as a temporary liquidity problem and lowed the discount rate.
- This was followed by a series of programs detailed in this next chart.

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

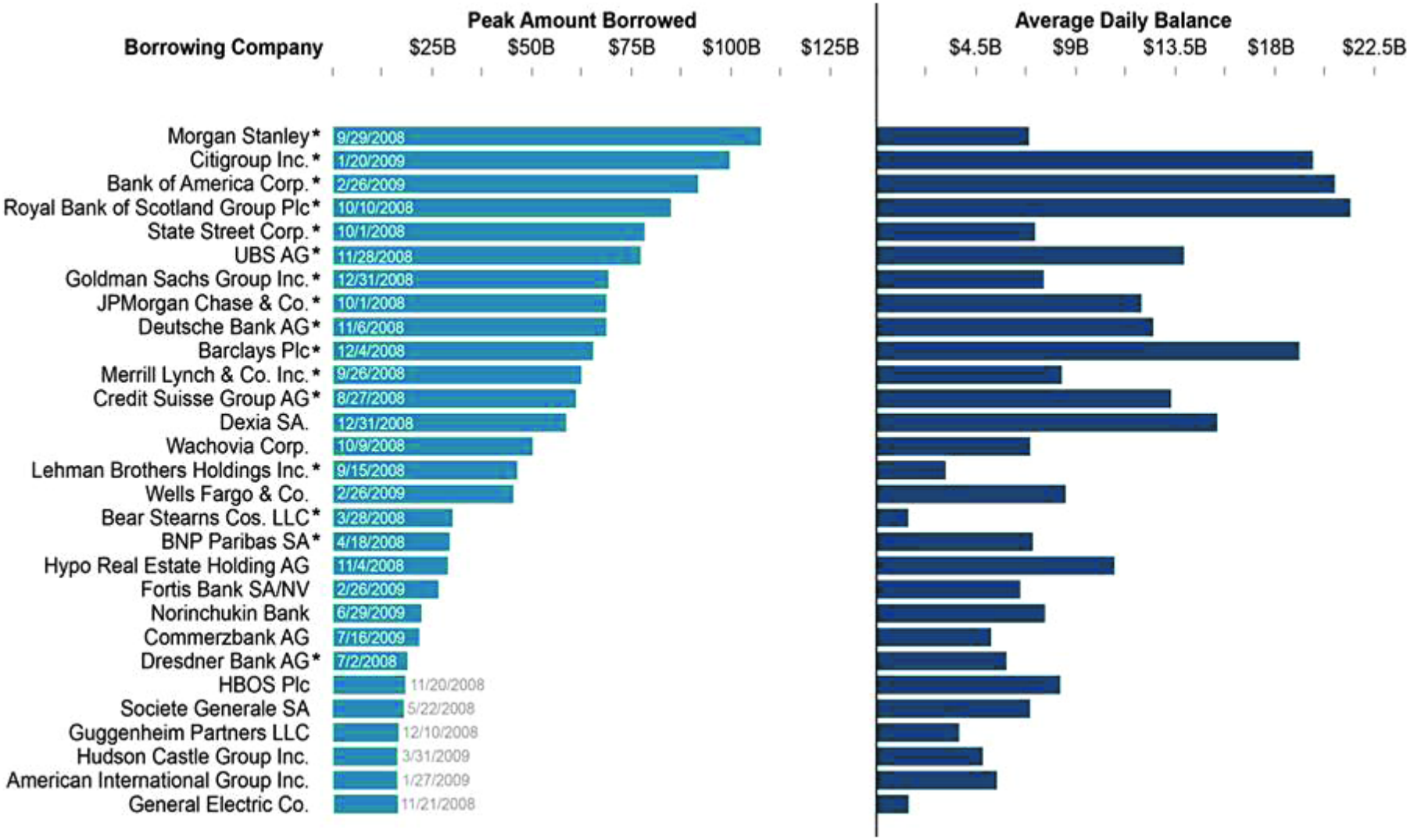
Federal Reserve Liquidity Facilities during the Crisis

	Facility	Date Announced	Eligible Borrowers	Maximum Amount Outstanding
DW	Discount window	Ongoing	Depository institutions	111
TAF	Term Auction Facility	December 12, 2007	Depository institutions	493
ST OMO	Single-tranche open market operations	March 7, 2008	Primary dealers	80
TSLF	Term Securities Lending Facility	March 11, 2008	Primary dealers	236
PDCF	Primary Dealer Credit Facility	March 16, 2008	Primary dealers	147
AMLF	Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility	September 18, 2008	Depository institutions	152
CPFF	Commercial Paper Funding Facility	October 7, 2008	Commercial paper issuers	351
	Programs for Central Banks and Non-Bank, Non-Primary Dealer Borrowers			
CBLS	Central bank liquidity swaps	December 12, 2007	Banks	583
	Money Market Investor Funding Facility	October 21, 2008	Money market investors	0
	Term Asset-Backed Securities Loan Facility	November 25, 2008	Asset-backed securities investors	48

Notes: Maximum amounts outstanding in billions of dollars based on weekly data as of Wednesday. Primary Dealer Credit Facility includes other broker-dealer credit. Central bank liquidity swaps are conducted with foreign central banks which then lend to banks in their jurisdiction.

Source: Michael Fleming, 2012 "Federal reserve liquidity provision during the financial crisis of 2007-2009," Federal Reserve Bank of New York Report, No. 563, p. 24, July

29 Institutions That Received the Most Liquidity Support from the Programs?



Source: Eisenbeis and Herring 2015

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Runs and Systemic Risks

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Runs and Systemic Risk

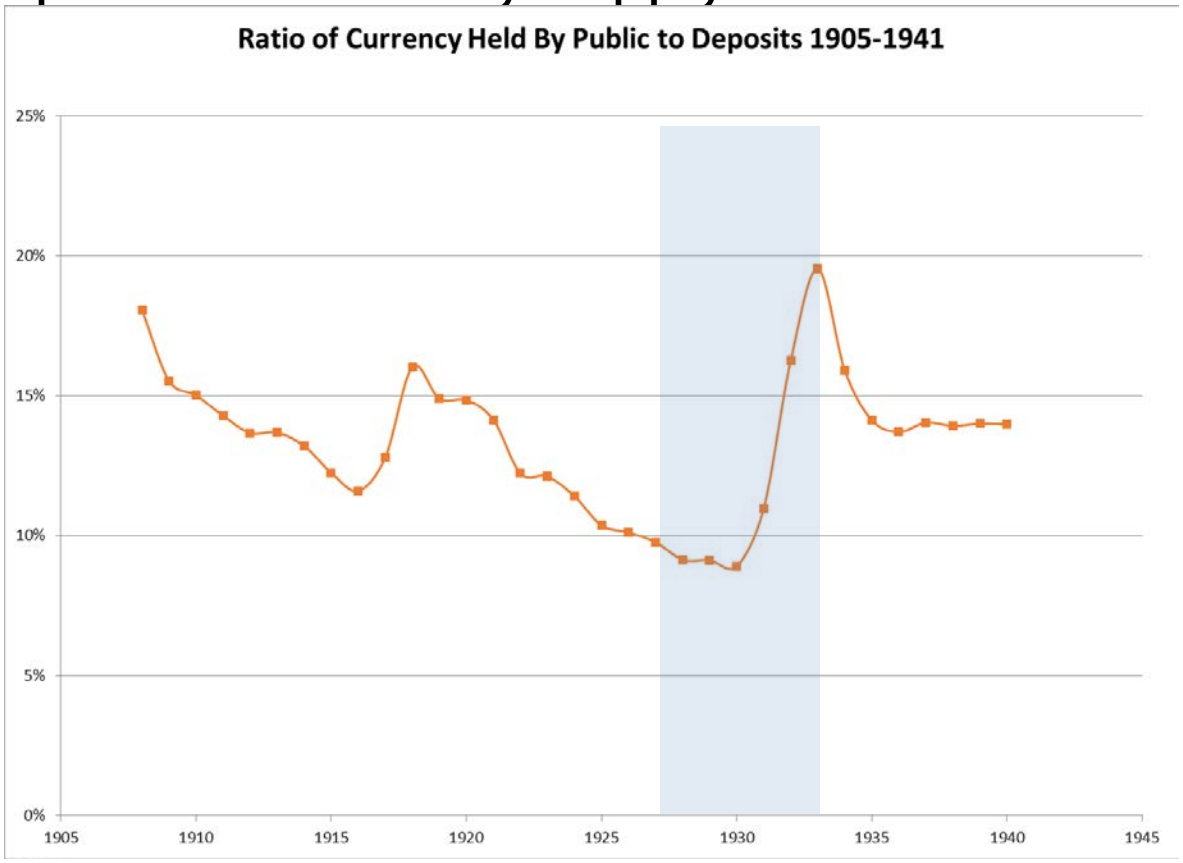
Depositors/creditors of financial intermediaries can do three things with their funds.

- They can exchange them for currency (classic run that has occurred several times in US history)
- Transfer funds to other similar but perceived safe intermediaries
- Exchange them for greater liquidity

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

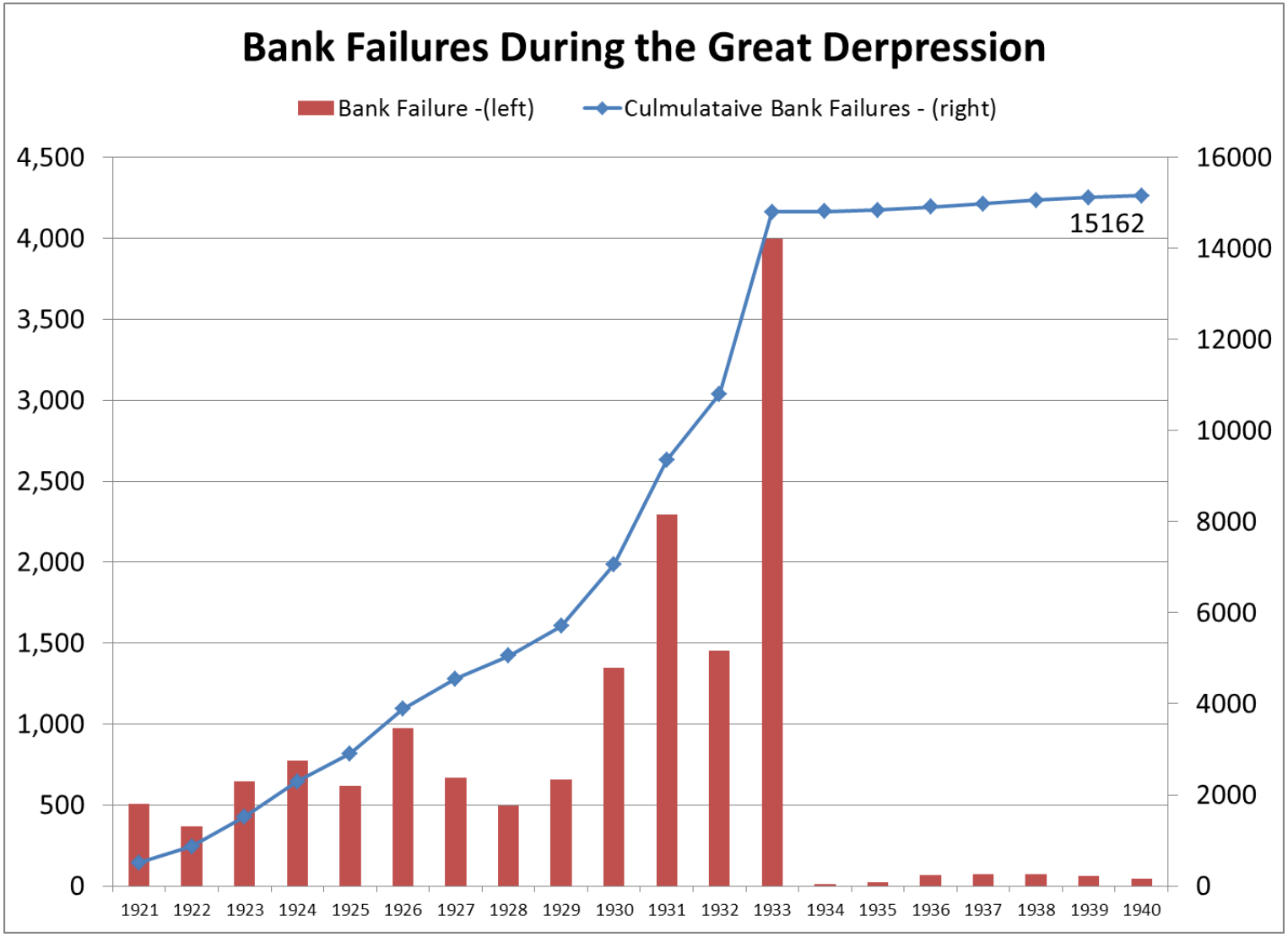
Runs in the Crises

- In the Great Depression the runs were into currency
- The result was a decline in aggregate bank credit and collapse of the money supply



©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Failures Peaked in 1934 and Decade Ended with 15,16 Failures



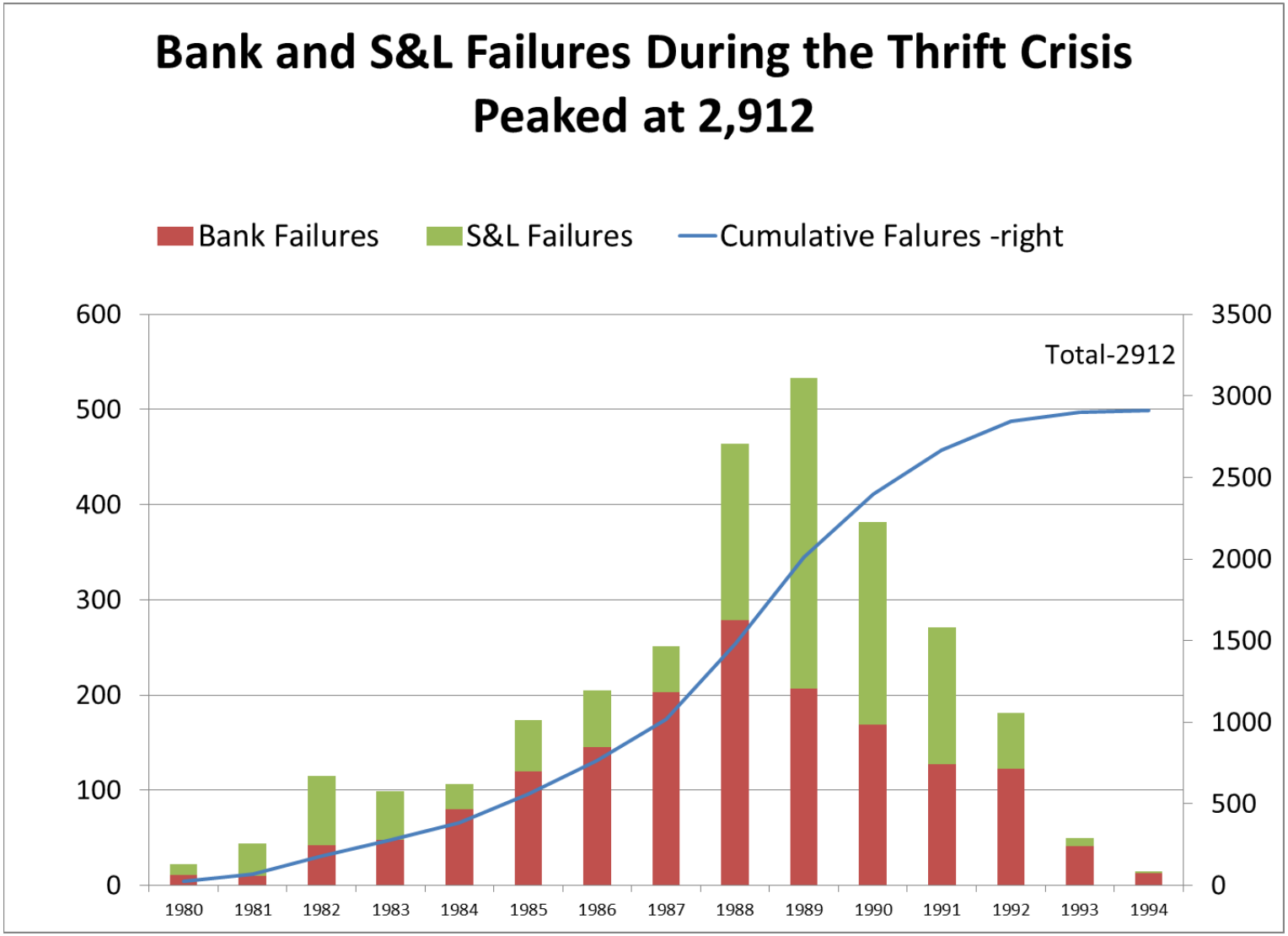
©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Runs in the Thrift Crisis

- In the thrift crisis, there weren't really runs per se but rather movement of funds by depositors to higher rate alternatives – disintermediation
- Nevertheless, the rapid rise in interest rates put thrifts and real estate specializing banks into a negative earnings and net worth situation leading to failures

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Thrift Crisis Failures



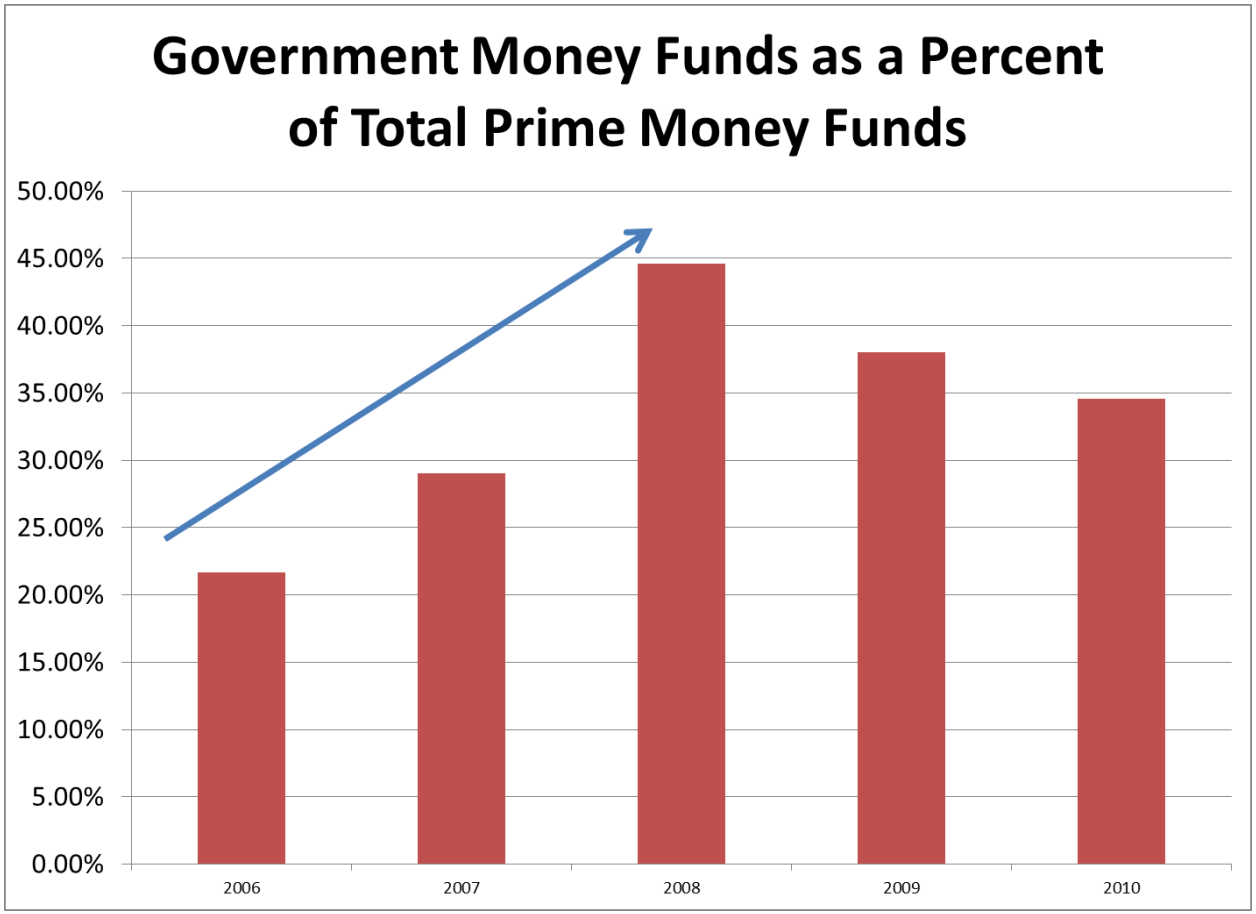
©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Runs During the Great Recession

- In the Great Recession the runs were by creditors to quality – ie. US Treasuries, and haircuts on collateral as it was revalued
  - Credit may have been constrained but there was not a collapse in the money supple
- There is also evidence from Ivashina and Sharfstein(2010) that firms moved to take down loans under lines of credit in anticipation of a loan supply squeeze
- We can see the flight to quality in the movement of funds into money market funds

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

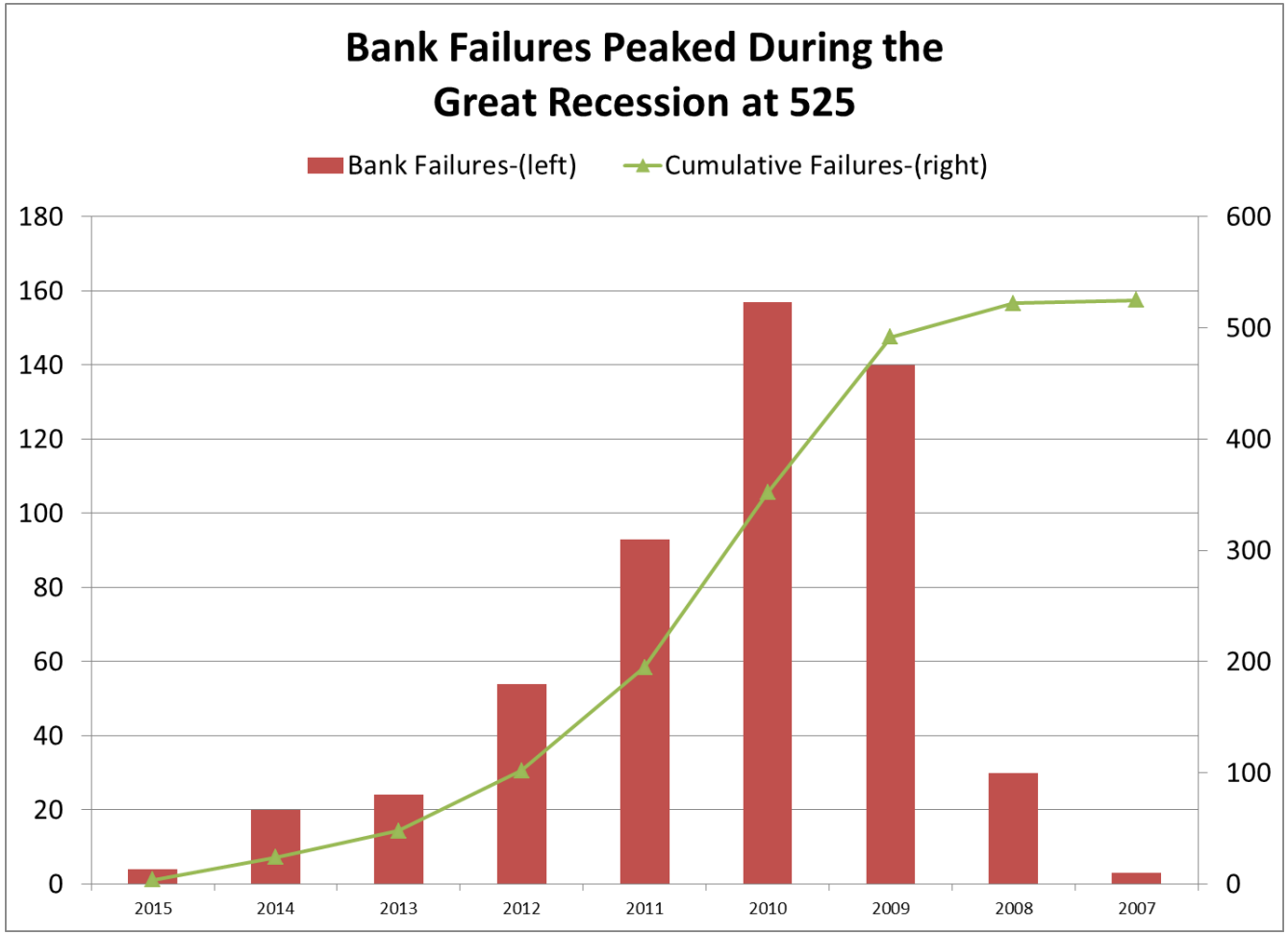
Flight to Quality



Assets in Government funds increased from 21.7% in 2006 to 44.6% in 2008 illustrating the quality flight

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Failures During the Great Recession Hit Especially the Largest Banks and Investment Bank



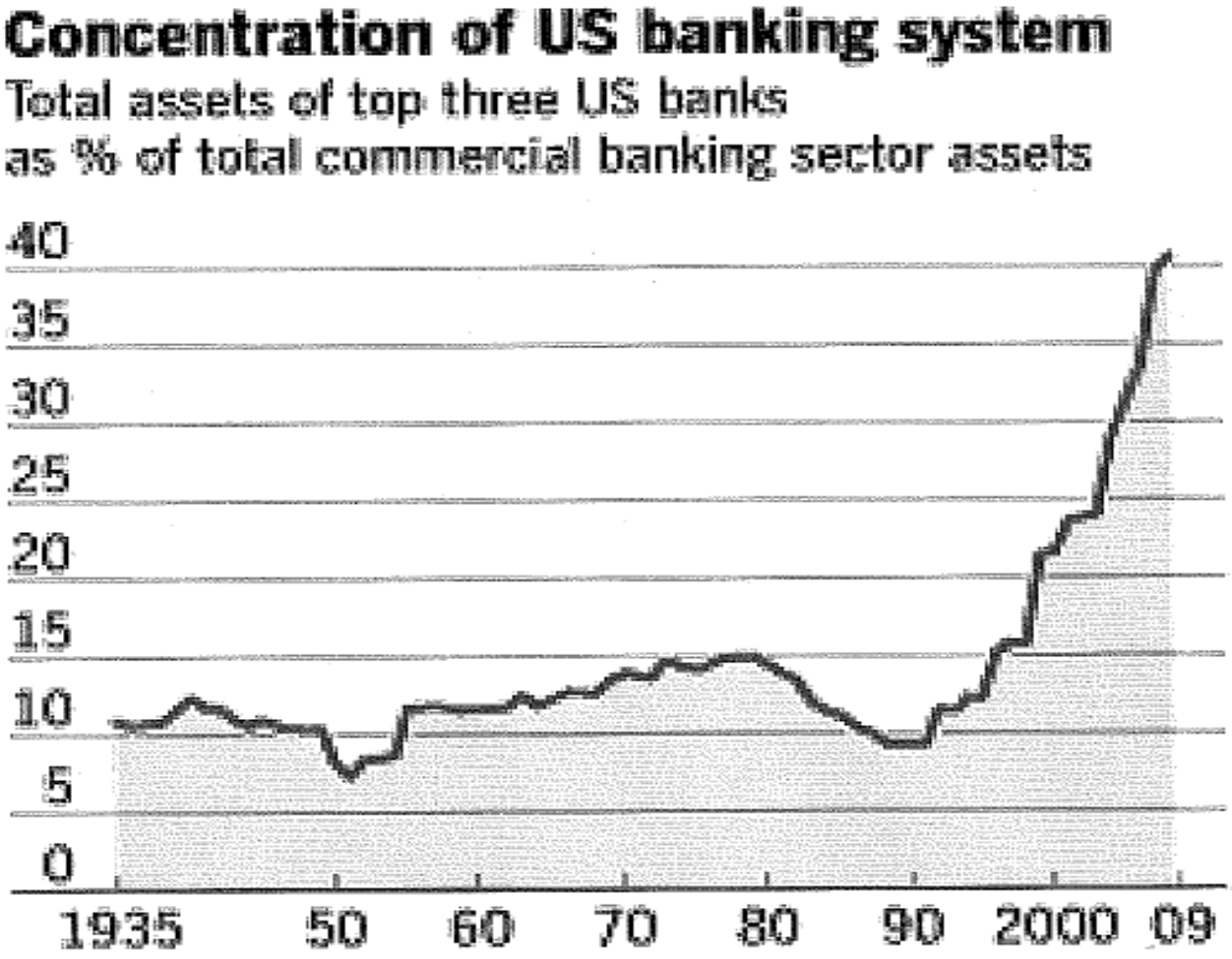
Major US and Foreign Financial Institution Acquisition and Failures

- Bear Stearns
- Countrywide
- Fannie and Freddie
- Merrill-Lynch
- Washington Mutual
- Wachovia
- Lehman Bros
- IndyMac
- ABN AMRO
- Northern Rock
- HBOS
- Fortis
- Dexia
- Royal Bank of Scottland
- Lloyds
- UBS

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

The Potential for Systemic Risks Increase with Banking Concentration

Figure 1



©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Longer Term Legislative and Regulatory Responses

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Longer Term Policy Responses – Great Depression

Financial Legislation

- Federal Home Loan Bank Act of 1932
- Banking Act of 1933
- Securities Act of 1933 (the Truth in Securities Act)
- National Housing Act of 1934
- Banking Act of 1935

Key Features

- Created FDIC and Home Loan Bank System
- Glass-Steagall separating banking and investment banking
- Instituted deposit rate ceilings
- Established SEC and regulated exchanges
- Restructured Fed and Created FOMC
- Eliminated double Liability for bank shareholders

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Longer Term Policy Responses – Thrift Crisis

Major Legislation

- Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMICA)
- The Garn-St Germain Depository Institutions Act of 1982
- Competitive Equality in Banking Act of 1987 (CEBA)
- Financial Institutions Reform, Recovery and Enforcement Act of 1989(FIRREA)
- The Federal Deposit Insurance Improvement Act of 1991 (FDICIA)

Some Key Features of Legislation

- Expanded thrift asset and liability products
- Phased out deposit rate ceilings on time deposits
- Increased deposit insurance coverage to $100K per acct.
- Permitted NOW accts
- Expanded ability of FDIC to provide aid to troubled institutions.
- Reformed and then abolished the FSLIC
- Tightened capital standards
- Cross guarantee provisions for bank holding companies
- Prompt corrective action and early intervention
- Risk-based deposit insurance premiums
- Limited Fed's ability to provide discount window loans to troubled institutions.

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Longer Term Policy Responses – Great Recession
Dodd-Frank Act

- Creates the Financial Stability Oversight Council
- Creates Office of Financial Research in Treasury
- Creates Bureau of Consumer Financial Protection Bureau
- Creates Office of national Insurance within Treasury
- Creates Office of Credit Rating Agencies within SEC
- Fed takes over regulation of thrift holding companies
- SEC to require registration of municipal financial advisors
- Volcker rule to prohibit proprietary trading, sponsorship of hedge funds and private equity funds
- Requires living wills by systemically important institutions
- Orderly liquidation authority and Orderly Liquidation Fund
- Provides for oversight of over the counter swaps market by SEC and CFTC
- Gives Fed responsible for systemic risk in payments and settlement systems
- Limits Troubled Asset Relief Program by reducing its authorized funding and limits use of unused funds
- Numerous other provisions and requires over 250 studies to be conducted

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Summary and Conclusion

- In summary, although excessive credit expansion and price bubbles were major causes of each of the three major financial crises, each crisis differed substantially in its characteristics – the macro environment that lead up to it, the nature of runs and bank and thrift failures and the legislative responses to the crises.
- Periodic crises are likely to be with us and credit bubbles will likely be central
- But the likely symptoms, consequences and public corrective responses will be different
- The approach should be forward looking not backward looking if we are to really avoid the problems
- The key questions are have we put in place the seeds for the next crises in our attempt to prevent it and have we increased too-big-to-fail and the likely costs to taxpayers

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.

Disclosure

All material presented is compiled from sources believed to be reliable. However, accuracy cannot be guaranteed. Past performance is no guarantee of future results. All investments involve risk including loss of principal. Fixed income investments are subject to interest rate and credit risk.

©Copyright 2014 Cumberland Advisors®. Further distribution prohibited without prior permission.