The European (and U.S.) Debt Crisis
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December 8, 2011
Disclaimer

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1. Introduction

- Presentation is in 5 parts:
  1. Introduction (including SITREP)
  2. European Debt Crisis
  3. (The related) U.S. Debt Crisis
  4. Impact
  5. Conclusion

- Topic is important because:
  - European and related U.S. Debt Crises are serious
  - Weak economic growth (short run), currency devaluation, inflation, and default (long run) are likely
  - Bond markets (especially Treasuries) are bubbles
  - Risks - and opportunities - are everywhere – just look at the current situation…
### World Bond Markets

#### Maturity: 10 Year

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Name</th>
<th>Maturity</th>
<th>Current Pricing Information</th>
<th>Yield Change</th>
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<tbody>
<tr>
<td>North/Latin America</td>
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<td>4) UST 2yr</td>
<td>UST</td>
<td>T 0 1/4</td>
<td>11/13</td>
<td>100.00 (+00+)</td>
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<td>5) UST 10yr</td>
<td>UST</td>
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<td>11/15/21</td>
<td>99.15 (-04+)</td>
<td>-86</td>
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<tr>
<td>6) UST 30yr</td>
<td>UST</td>
<td>T 3 1/8</td>
<td>11/41</td>
<td>101.12 (-17)</td>
<td>-119</td>
</tr>
<tr>
<td>7) Canada 10yr</td>
<td>Canada</td>
<td>CAN3</td>
<td>1/4</td>
<td>109.930 (-0.64)</td>
<td>-103</td>
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<td>8) MX Global 10yr</td>
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<td>MEX8</td>
<td>09/24/22</td>
<td>141.000 (+0.500)</td>
<td>-38</td>
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<td>9) BR Global 9yr</td>
<td>BR</td>
<td>BRAZIL4</td>
<td>7/8</td>
<td>112.283 (-0.117)</td>
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<td>10) CO Global 10yr</td>
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<td>COLOM</td>
<td>4 3/8</td>
<td>107.405 (-0.95)</td>
<td>-43</td>
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<td>Europe/Africa/Middle East</td>
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<td>11) UK 10yr</td>
<td>UK</td>
<td>UKT3</td>
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<td>-115</td>
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<td>France</td>
<td>FRTR</td>
<td>3 1/4</td>
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<td>-4</td>
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<td>13) Germany 10yr</td>
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<td>DBR2</td>
<td>01/04/22</td>
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<td>14) Italy 10yr</td>
<td>Italy</td>
<td>BTPS</td>
<td>4 3/4</td>
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<td>15) Spain 10yr</td>
<td>Spain</td>
<td>SPGB</td>
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<td>16) Sweden 10yr</td>
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<td>ACGB</td>
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<td>21) N Zealand 10yr</td>
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<td>NZGB</td>
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<td>115.826 (+0.237)</td>
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<td>Movers</td>
<td>Volatility</td>
<td>Ratios</td>
<td>Pre-Market</td>
<td>Display</td>
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<td>8712.80</td>
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<td>15848.21</td>
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<td>977.46</td>
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<td>5767.93</td>
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<td>4262.00</td>
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Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2011 Bloomberg Finance L.P. SN 482933 EST GMT-5:00 H428-615-0 06-Dec-2011 12:26:44
US Money Supply (M2, i.e., M1 [currency and demand deposits] plus household savings, time deposits, retail mutual funds), 30 years, logarithmic scale (12.4 x 1970 level)
1. Introduction (contd.)

Gold Spot Price (30 yrs, log scale)
2. European Debt Crisis

- European sovereign debt crisis (2009 - current):
  - Is a crisis in investor confidence about select European countries’ ability and/or willingness to pay their debt obligations;
  - Is related to increased risk among select banks and financial institutions
  - Is related to increased likelihood of European and global double-dip recession
  - Some countries in worse shape than others ("PIGS" countries):
    - Greece
    - Italy
    - Ireland
    - Portugal
    - Spain
  - Growing risk of contagion to rest of Europe, U.S., and world

- Recent rating agency downgrades of select countries, threats of imminent downgrades to many countries, and emergency meetings and stop-gap solutions, are symptoms
European Debt Crisis - caused by perfect storm of:

- Easy credit 2002-07 encouraged risky borrowing and lending (possibly due to excess savings over this period, and resulting low yields and asset bubbles)
- Some EU countries (Greece, Italy) circumvented spending and debt rules of Maastricht Treaty (1992) by masking deficits/debts through currency/credit derivatives (with assistance of U.S. banks)
- Burst real estate bubble
- Financial Crisis of 2007-08
- Debt-financed government bail-outs of problem banks
- Continuing slow economic growth post-Financial Crisis
- Excessive government spending and debt financing
2. European Debt Crisis (contd.)

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### Chart: European Debt Crisis Monitor

<table>
<thead>
<tr>
<th>Country</th>
<th>Last Time</th>
<th>%chg</th>
<th>Yield</th>
<th>Chg(bps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>6180.49</td>
<td>12:10</td>
<td>1019.91</td>
<td>13:00</td>
</tr>
<tr>
<td>Ireland</td>
<td>2471.51</td>
<td>12:10</td>
<td>826.26</td>
<td>13:00</td>
</tr>
<tr>
<td>Italy</td>
<td>15140.98</td>
<td>11:30</td>
<td>375.99</td>
<td>13:00</td>
</tr>
<tr>
<td>Greece</td>
<td>1006.59</td>
<td>10:19</td>
<td>2189.28</td>
<td>13:00</td>
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<tr>
<td>Spain</td>
<td>8395.00</td>
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<td>375.47</td>
<td>13:00</td>
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<td>Hungary</td>
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<td>434.86</td>
<td>8/29</td>
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<tr>
<td>Belgium</td>
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<td>12:10</td>
<td>243.72</td>
<td>13:00</td>
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<tr>
<td>France</td>
<td>3154.20</td>
<td>11:44</td>
<td>165.28</td>
<td>13:00</td>
</tr>
</tbody>
</table>

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### News:

- **BN 12:40 Hunt for Wi-Fi Crowds Bookstores, Cafes With Stranded Workers**
- **BN 12:01 Trichet Says ECB Reviewing Inflation Risks as Growth Slows (2)**
- **BN 12:00 EU’s Rehn ‘Seriously Concerned’ About Market Turmoil Spillover**
2. European Debt Crisis (contd.)

- European debt crisis begins late 2009
  - Rating agencies begin to downgrade select European country debt
  - Early 2010, Greece, Ireland, Portugal (6% of Eurozone GDP) face difficulties in refinancing debt
  - May 9, 2010, European Finance Ministers approve €750 billion rescue (European Financial Stability Facility, or EFSF)
  - Oct. 2010, European leaders agree to 50% write-off of Greek debt owed to private creditors, increased EFSF to €1 trillion, increased European bank capitalization requirements to 9% of assets
  - Eurozone countries cannot increase money supply (monetize debt) except by multinational agreement
  - European leaders have so far failed to reach agreement about money supply increase (Germany is resisting, in part owing to their experience with hyper-inflation in 1923, and its aftermath)
  - Doubt about European leader’s ability/willingness to reach agreement is deepening the crisis
2. European Debt Crisis (contd.)

- Different countries have different problems:
  - Greece (1st bailout country)
    - Strong economy in early- to mid-2000’s
    - Generous commitments to government workers (increased pay, pensions, early retirement)
    - Increased defense spending
    - Financial collapse of 2007-08 and global recession hurt Greece’s 2 major industries – shipping and tourism
    - Greece could not roll over debt
    - April 2010 – Greece requests EU/IMF bail out of € 45 billion
    - April 2010 – S&P downgrades Greek debt to BB+ (junk), Greek 2-year bond yield hits 15.3%, S&P estimates 30-50% haircut if default. Global stock markets and Euro decline
    - May 2010 – austerity measures introduced, leading Germany to agree to € 110 billion EU/IMF bail out
    - May 2010 – violent national strike opposes austerity measures (spending cuts, tax increases)
    - May 2011 – Greek people reject austerity
    - June 2011 – Greece proposes € 28 billion cuts over 5 years, S&P downgrades Greek debt to CCC, Papandreou shuffles cabinet, world stock markets decline
    - July 2011 – extra € 109 billion bail out with privatization
    - October 2011 – Eurozone leaders and IMF get banks to agree to 50% write-off of € 100 billion in Greek debt, with goal of reducing Greek debt to 120% of GDP by 2020
### European Debt Crisis (contd.)

![Finance Chart]

#### Money Rates
- **O/N DEPO**: 0.500
- **O/N LEND**: 2.000
- **1 Week**: 1.250
- **3M Repo**: 1.492

#### Spot Forex
- **€/USD**: 1.3397
- **€/GBP**: 0.8596
- **€/JPY**: 104.1302
- **€/CHF**: 1.2423
- **€/DKK**: 7.4345
- **€/CAD**: 1.3556
- **€/AUD**: 1.3094
- **€/CYP**: 7.7175
- **€/MTL**: 0.4293

#### Effective Q/N Futures
- **Eonia**: 0.73
- **Eureonia**: 0.53

#### Date Time
- **12/8 GR**
  1) **CPI - EU Harmonized (YoY)**
  2) **Consumer Price Index (YoY)**
  3) **Unemployment Rate (Monthly)**
  4) **Survey**: 2.8% 2.9%
  5) **Actual**: 3.0% -1.7%
  6) **Prior**: 3.0% 18.4%

#### Stock Indices
- **ASE**: 679.94
- **FTSEM**: 688.64
- **FTSE**: 268.68

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For more detailed analysis and data, please refer to the full report or specific financial data sources.
2. European Debt Crisis (contd.)

Euro-Zone Holders of Greek Debt by Institution

Source: FT, Capital Economics
2. European Debt Crisis (contd.)

- Different countries have different problems (contd.):
  - Ireland (2\textsuperscript{nd} bailout country)
    - Irish financial crisis was caused by Irish government’s 2008 guarantee of 6 Irish banks that had financed the Irish property bubble that collapsed in 2007
    - Irish banks lost approx. €100 billion.
    - Instead of guaranteeing bank deposits and allowing private bondholders to lose, Irish government borrowed money from ECB to buy bad loans
    - Economic collapse in 2008 led government surplus of 2007 to 32% of GDP deficit in 2010, despite austerity measures
    - September 2010, Irish bank efforts to raise financing failed, government extended guarantees, Irish government bonds negatively affected
    - Nov. 2010 €67.5 billion bailout from U.K., Denmark, Sweden
    - April 2011 - despite austerity measures, Moody’s downgrades Irish debt to junk

- Ireland may be the model for the rest of Europe should the rest of Europe attempt to bail out problem countries
2. European Debt Crisis (contd.)

- Different countries have different problems (contd.):
  - Portugal (3rd bailout country)
    - Between 1974-2010, a series of public-private partnerships with external consultants resulted in over-spending and investment bubbles, redundant high-paid senior civil servants (but failure to spend on public works), debt creation, and mismanagement in structured funds
    - Problems arose in 2005, and again in 2011
    - By 1st quarter 2010, Portugal was doing well economically
    - However, by 2011, country was on verge of bankruptcy
    - Speculation led to €78 billion bailout by EU/IMF in May 2011
    - July 2011 – Moody’s downgraded Portugal to junk
  - Italy
    - Low decade-long growth led investors to believe Italy couldn’t repay its bonds
    - By 2010, Italy’s debt was 120% of its GDP (€2.4 trillion)
    - July-September, 2011 – austerity measures adopted
    - Nov. 2011 – 10 year bond yield climbed to more than 7%
    - P.M. Berlusconi resigned, emergency government formed, additional austerity measures adopted (including planned sale of €15 billion in real estate, eventual increase in retirement age)
2. European Debt Crisis (contd.)
2. European Debt Crisis (contd.)
2. European Debt Crisis (contd.)
2. European Debt Crisis (contd.)

- Different countries have different problems (contd.):
  - Spain
    - 2010 – deficit was 9.2% GDP
    - 2010 – Weak growth and financial market pressure leads Spain to announce austerity measures
    - 2011 – Constitutional amendment requires balanced budget by 2020, with 60% debt to GDP maximum except for exceptional circumstances (including recession)
  - Belgium
    - 2010 – debt was 100% GDP (in Europe, only Greece and Italy are higher)
    - Growing doubts about Belgian banks owing to their holdings of PIGS debt
    - June 2011 elections failed to form majority government
    - Belgium is forecasted by many to be next crisis country
  - France, U.K. Banks could be affected by failures in PIGS countries
  - Iceland
    - Pre-crisis, Iceland banks had 10x GDP. When failed, allowed intl. operations to fail, supported domestic with help of IMF Stand-By Agreement
  - Switzerland
    - Devaluing currency amid weakening Euro
2. European Debt Crisis (contd.)
2. European Debt Crisis (contd.)
2. European Debt Crisis (contd.)

Source: BIS via NYT
3. U.S. Debt Crisis

- European debt crisis should not be viewed in isolation – it is part of a developed world debt crisis
- “Europe” is currently where the U.S. appears to be headed
- U.S. data on unfunded liabilities, calculation of GDP, CPI, etc., is easier to obtain, so a look at the U.S. debt crisis sheds more insights into the potential future of the European debt crisis
- Several U.S. states (California, Illinois, etc.) are larger in GDP yet could face similar debt crises to some PIGS countries

- Is Europe too big to fail?
- Is the U.S. too big to fail?
- Is the Western social welfare state system too big to fail?
3. U.S. Debt Crisis (contd.)

**US Debt Clock**
- $15 trillion national debt (official federal govt.)
- $54 trillion total debt (household, business, state, local, federal government)
- $117 trillion US unfunded liabilities (social security, prescription drug, medicare)
- **U.S.:** $171 trillion unofficial total debt
- **U.S.:** $15 trillion GDP (unofficial total debt is 11.4 times US GDP)

**World Debt Clock**
- Greece 166% public debt to GDP (208% external debt to GDP)
- Ireland 136% (1214%)
- Italy 119% (152%)
- Portugal 100% (252%)
- Spain 67% (214%)
- Japan 197% (54%)
- China 15% (10%)
- USA 75% (102%) – officially
3. U.S. Debt Crisis (contd.)

- GDP – measures overall economic activity
- Bureau of Economic Analysis adjusts GDP upward for imputed “rent” that “should” be paid by home owners and “value” of free checking accounts
- 2003-04, these total $1.6 trillion (35% of GDP)
- If GDP is overstated 35%, debt to GDP would be 1.54X previous estimates (17.56X)
- Overstating GDP results in overstating real GDP (i.e., GDP controlling for inflation), especially if CPI is also adjusted...
3. U.S. Debt Crisis (contd.)

GDP Annual Growth - Official vs SGS
Annual Change through 2011q2 (SGS, BEA)

- Official (BEA)
- SGS Alternate

Published: Aug. 26, 2011
shadowstats.com
3. U.S. Debt Crisis (contd.)

- Inflation = measured using headline “CPI”*
  - Bureau of Labor Statistics calculates CPI
  - It changes CPI model using “hedonic” regressions for “perceived” attributes and changes in weightings
  - WSJ estimates 1970s-style CPI model puts current inflation at 11% (not govt. reported 1.7-1.9%)
  - Revisions ALWAYS reduce reported inflation (and thus TIPS interest, pension payments, etc.)
  - If hedonics, weightings, and imputations overstate GDP and understate CPI, we may have been in a depression for 10 years (except 2004)...
- Some claim inflation should be core CPI (i.e., excluding food and energy, or “inflation less inflation”)
3. U.S. Debt Crisis (contd.)

Annual Consumer Inflation - CPI vs SGS Alternate
Year to Year Change. Through July 2011. (BLS, SGS)

Published: Aug. 18, 2011

shadowstats.com
3. U.S. Debt Crisis (contd.)

- Even modest adjustment of GDP with CPI suggests we may already be in recession - debt crises helps put us here
3. U.S. Debt Crisis (contd.)

- Unemployment statistics are also not immune to “adjustments”
3. U.S. Debt Crisis (contd.)

- “USA Inc.” study suggests unfunded liabilities are slightly lower than my estimates:
  - Medicaid $35 trillion
  - Medicare $23 trillion
  - Social security $8 trillion
- Still puts federal debt in excess of $80 trillion (536% of GDP)

- But Congress agreed to cut more than $2 trillion in spending following the debt ceiling debate...

- Not exactly...
  - Bill Gross (PIMCO) - says “out year” cuts are “fantasies”
  - OMB estimates future deficits were reduced 0.5%
  - OMB estimates also assume rosy 3% GDP growth projections
4. Implications

• **Question for Europe**
  - Bail out – likely requiring fiscal confederation/integration (preferred by Southern European countries) – UBS thinks this will happen
  - Blow out – some countries will depart Euro – Capital Economics thinks this is more likely, including Greece departure 2012, Portugal, possibly Ireland, 2013
  - Walk out – Germany could leave

• **Implications for Europe**
  - **Short-run:**
    - Likely recession
    - Uncertainty, volatility
    - Sovereign and corporate defaults, bank failures, collapse in international trade
    - Higher bond yields, especially in Italy, but perhaps even in Germany, can be expected
    - High probability Greece, possible Portugal or even Ireland, depart
  - **Intermediate- to Long-run:**
    - Growth and stability
    - ...pay me now, or pay me later...
Sovereign debt usually precludes “growing your way out”

Source: Fidelity Investments based on “Growth in a Time of Debt” by Kenneth Rogoff and Carmen Reinhart
4. Implications (contd.)

- How can countries deal with debt crises?
  - Economic Growth (Increase Govt. Spending) (inefficient)
  - Economic Growth (Reduce/Reform Taxes)
  - USA Inc. – Recommends US government adopt business GAAP - an excellent first step, but...
  - Asset Sales – US total national assets (government, business, and individuals) are about $71 trillion, so there are not enough...
  - Reduce Discretionary Spending – also a nice first step, but...
  - Increase Taxes (slows economy and reduces revenues) – bad idea
  - Imperialism (rarely works, might not be popular (Donald Trump))
  - Monetize Debt (i.e., create money and thus inflation) (Keynes (1919) described this as “stealth default”)
  - Manipulate statistics to reduce interest on the debt – in process...
  - Strategic Default – including what Bill Gross (PIMCO) describes as “Debt Men Walking”
  - Some combination of some or all of the above is most likely...
4. Implications (contd.)
“Governments should default at least once every hundred years in order to restore equilibrium”

Abbe Terray, French Finance Minister (1768-1774)
4. Implications (contd.)

Debt/GDP Projections

Source: BIS
4. Implications (contd.)

- **US**
  - Low growth, persistent high unemployment
  - Continuing resolutions & debt ceiling – no meaningful cuts
  - Stock market and commodities recover (oil, precious metals, etc.) as money is created
  - Weak real estate in short- and intermediate-term
  - Eventually, inflation (stagflation-style, possibly hyper-inflation from debt & currency creation
  - Municipal bonds – tax treatment becomes more attractive over time
  - High yield will recover
  - U.S. Treasury bubble will collapse (so watch duration)
  - TIPS – imperfect hedge vs. inflation – eventually outperform
  - Falling dollar and stock market.

- By the way – could America miss 1 or 2 decades like Japan?
4. Implications (contd.)
4. Implications (contd.)

- International
  - Zombie developed countries kick debt cans down road
  - European debt crisis precipitates bailouts to prevent bank failures
  - European debt problems lead to further flight to safety in US $
  - Some Euro countries are expelled; Euro may not survive
  - Japan remains unattractive
  - Canada and Australia are attractive
  - Emerging markets still more attractive
  - New Bretton Woods Agreement possible

- Both US and International
  - Expect volatility
  - Pick asset classes carefully - *diversify* – uncertainty and volatility are here and inflation is coming
4. Implications (contd.)
4. Implications (contd.)

- Bill Gross (PIMCO) recommendations:
  “Favor countries with cleaner “dirty shirts” and higher real interest rates: Canada, Mexico, Brazil and Germany come to mind. Shade equity and fixed income investments away from dollar based indexes towards those of developing nations with stronger growth prospects. Purchase commodity based real assets before reserve surplus nations do. And above all, don’t be lulled to sleep by Congressional law makers that promise change in Washington.”

  Bill Gross, August 2011
5. Conclusion

- Today’s 3-part presentation focused on the European Debt Crisis, US Debt Crisis, and Implications

- It shows:
  - European and U.S. debt situations are probably worse than most believe
  - Weak economic growth (short run), possible break-up of the Euro, currency devaluations, inflation, and sovereign, corporate, and bank defaults are likely (intermediate to long run)
  - Bond markets (especially Treasuries) are potential bubbles – exercise extreme caution
  - Real assets – real estate, stocks, commodities, gold, will eventually prevail
  - Good news - not only are risks but opportunities everywhere!
Questions?