ESCAPING THE DEBT ADDICTION:
Monetary and macro-prudential policy in the post-crisis world

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Banks create credit, money and purchasing power

Loan to entrepreneur → 100

Credit to entrepreneurs deposit account → 100

Institute For New Economic Thinking

Escaping Debt Addiction | 1
Dynamics of real GDP and credit
(Year on year % change)

Household deposits and loans: UK 1964 – 2009

Source: Bank of England, Tables A4.3, A4.1
Private and public leverage cycles: US

Source: McCulley and Pozsar
Private domestic credit as a % of GDP: 1950 – 2011

China: total social finance to GDP
Non-financial private sector* credit outstanding: % of GDP

Source: BIS, Citi Research
*Households + corporates
Real annual credit and GDP growth in emerging markets: 1996-2011

Source: IMF, Haver Analytics, Citi Research
Total German private sector leverage: 1991 - 2010
Private credit to GDP and growth

Source: "Reassessing the impact of finance and growth“, S. Cecchetti and E. Kharroubi, BIS Working Paper No. 381
Credit and asset price cycles

- Increased credit extended
- Increased borrower demand for credit
- Increased asset prices
- Expectation of future asset price increases
- Low credit losses: high bank profits
  - Confidence reinforced
  - Increased capital base
- Favourable assessments of credit risk
- Increased lender supply of credit
The Dilemma

<table>
<thead>
<tr>
<th>Pre-crisis path of nominal GDP growth</th>
<th>~ 4% - 5%</th>
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<tbody>
<tr>
<td>Pre-crisis path of credit growth</td>
<td>~ 10% - 15%</td>
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| ~ 2% real growth |
| ~ 2% inflation |

If central banks had raised interest rates to slow credit growth
.... this would presumably mean slower nominal GDP growth?

We seem to need Ĉ > NGĐP to ensure adequate NGĐP
... but this produces financial instability and post-crisis recession
Categories of debt: UK, 2009

- Primarily productive investment: £232bn
- Some productive investment and some leveraged asset play: £243bn
- Mainly purchase of existing assets: £1235bn
- Pure life-cycle consumption smoothing: £227bn
Corporate loans by broad sector: 1987 – 2008

Note: Part of the increase in real estate lending may be due to re-categorisation of corporate lending following sale and lease-back of properties and PFI (public finance initiative) lending, but we do not think these elements are large enough to change the overall picture. Break in series from Q1 2008 due to inclusion of building society data. Sterling borrowing only.

Source: ONS, Finstats
The dominance of real estate in bank lending

<table>
<thead>
<tr>
<th>Total bank credit to domestic private sector</th>
<th>Mortgage credit</th>
<th>Mortgage credit as % of total</th>
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<tbody>
<tr>
<td>129%</td>
<td>74%</td>
<td>57%</td>
</tr>
<tr>
<td>206%</td>
<td>131%</td>
<td>64%</td>
</tr>
<tr>
<td>155%</td>
<td>78%</td>
<td>50%</td>
</tr>
<tr>
<td>175%</td>
<td>101%</td>
<td>57%</td>
</tr>
<tr>
<td>122%</td>
<td>78%</td>
<td>64%</td>
</tr>
<tr>
<td>130%</td>
<td>91%</td>
<td>70%</td>
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</table>

+ Commercial real estate at typically around 20% - 25% of total lending


(*Bank and non-bank combined)
Three conceptually distinct functions of lending

**Finance of increased consumption**
- Enabling inter-temporal shift of consumption within life time income

**Finance of new capital investment**
- Non-real estate
- Commercial real estate
- Residential real estate
- Human capital

**Finance of purchase of existing assets**
- Real estate
- Collectibles
- Existing business assets – e.g. Leveraged Buy Outs
National non-financial assets as a % of GDP

Source: Blue Book 2013

Source: Vermoegensbilanzen 1991-2012 Destatis
UK household net worth £trillion: 2012

- Houses, other buildings and land: 4.5
- Loans: 1.5
- Deposits & currency: 1.3
- Real estate + net monetary assets: 4.3
- Other financial assets – claims against business debt and equity: 3.2
- Other - mainly cars: 0.1
- TOTAL: 7.6

Source: ONS National Banking Sheets
Variation in land value per hectare: UK 1983 – 2010

£ million

Source: Blue Book 2013
Credit extension and house prices

House prices 2000 – 2007

Household debt as a % of GDP 2000 – 2007

Source: Ministry of Housing (Spain), S&P (US), DCLG

Source: BEA; ONS; ECB
Interactions between credit categories and effects

- Increasing credit supply / demand
- Increased price of existing real estate
- Reduced saving: increased consumption
- Increased apparent wealth
- Increased prices for new real estate
- Boom in new real estate construction
- Borrower and lender net worth, confidence and expectational effects
- Equity withdrawal mortgage supply & demand
Inequality, demand and credit

- Rich have higher marginal propensity to have than poor
- Rising inequality
- Deflationary impetus – growth on NGDP falls
- ▲ Savings not matched by ▲ investment

• Rich lend to poor
• Central banks facilitates

Deflationary impetus offset:
• NGDP growth maintained
• Growth in credit intensity
Changes in housing wealth: UK 2003 – 2013

- Households with no mortgage debt: £556 bn
- Buy-to-let landlords: £434 bn
- Households with mortgages: £-59 bn

Source: Savills, *Private landlords gain the most from rising property market*, Financial Times, 18 January 2014
Global current account balances as a % of world GDP

Source: IMF BOPS

Source: International Monetary Fund, World Economic Outlook Database, October 2012
Decomposition of cumulative capital inflows: Spain (% of 2007 GDP)
Sectoral financial surpluses/deficits as % of GDP: Japan 1990 – 2012

Source: IMF, Bank of Japan Flow of Funds Accounts
Japanese government and corporate debt: 1990 – 2010

Source: BoJ Flow of Funds Accounts, IMF WEO database (April 2011), FSA calculations
Shifting leverage: private and public debt-to-GDP

Source: OECD National Accounts
Policies required to achieve more stable growth

Reduction in inequality or at least reduced pace of increase in inequality

Reduction in global current imbalances between surplus and deficit nations
  - Remove biases to credit creation in deficit countries
  - Remove biases to excessive savings in surplus countries

Integrated set of monetary, macro-prudential and fiscal policies to lean against ‘too much of the wrong sort of debt’.
Monetary, macro-prudential and fiscal policies to combat excessive debt creation

<table>
<thead>
<tr>
<th><strong>Level</strong> as well as rate of growth of leverage as a key indicator</th>
<th>But no <em>precise</em> threshold for ‘too high’ leverage can be defined</th>
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<tbody>
<tr>
<td>Preemptive interest rate rises to lean against credit/asset price cycles</td>
<td>But insufficient due to heterogeneous interest rate elasticity of credit demand</td>
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| Tax on credit intermediation – or at least removal of tax biases in favour of debt | • Recognises the adverse externality of debt creation  
• Major political difficulties given winners and losers  
• Dangers of arbitrage via shadow banking |
| Encourage equity and hybrid contracts | Unlikely to occur spontaneously without government support |
| Much higher bank capital ratios | Would require parallel action to prevent shadow bank based arbitrage |
| Manage the mix of credit by category | |
Managing the mix of credit by category: possible policies

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<tr>
<td>Increase capital risk weights for real estate finance above those</td>
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<td>indicated by private assessment of risk</td>
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<td>Addresses the externality of lending against real estate</td>
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<td>Loan-to-value or loan-to-income limits on real estate lending</td>
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<tr>
<td>Borrower constraint since lender constraints imperfect</td>
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<tr>
<td>Underwriting mortgage standards to prevent reliance on price rise</td>
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<tr>
<td>assumptions</td>
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<td>Introduced by UK FCA</td>
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<td>Constraints on high interest consumer lending</td>
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<tr>
<td>• Danger of illegal alternatives</td>
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<tr>
<td>• Constraints on marketing preferable to prohibition</td>
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<td>Banks with dedicated focus on non-real estate business finance</td>
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<tr>
<td>To avoid crowding out of investment or trade finance</td>
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Real yields to maturity on UK indexed linked gilts

Source: Bank of England Statistics, Zero coupon real yields
Velocity of money circulation

Velocity of Money
(Nominal GDP/M2)

Velocity of Money
(Nominal GDP/M4)

Source: BoE, BoJ, Datastream