Citi Research

August 22, 2012

Global Economic and Strategic Outlook

Riding Global Waves of Uncertainty: Asia's Ongoing Journey

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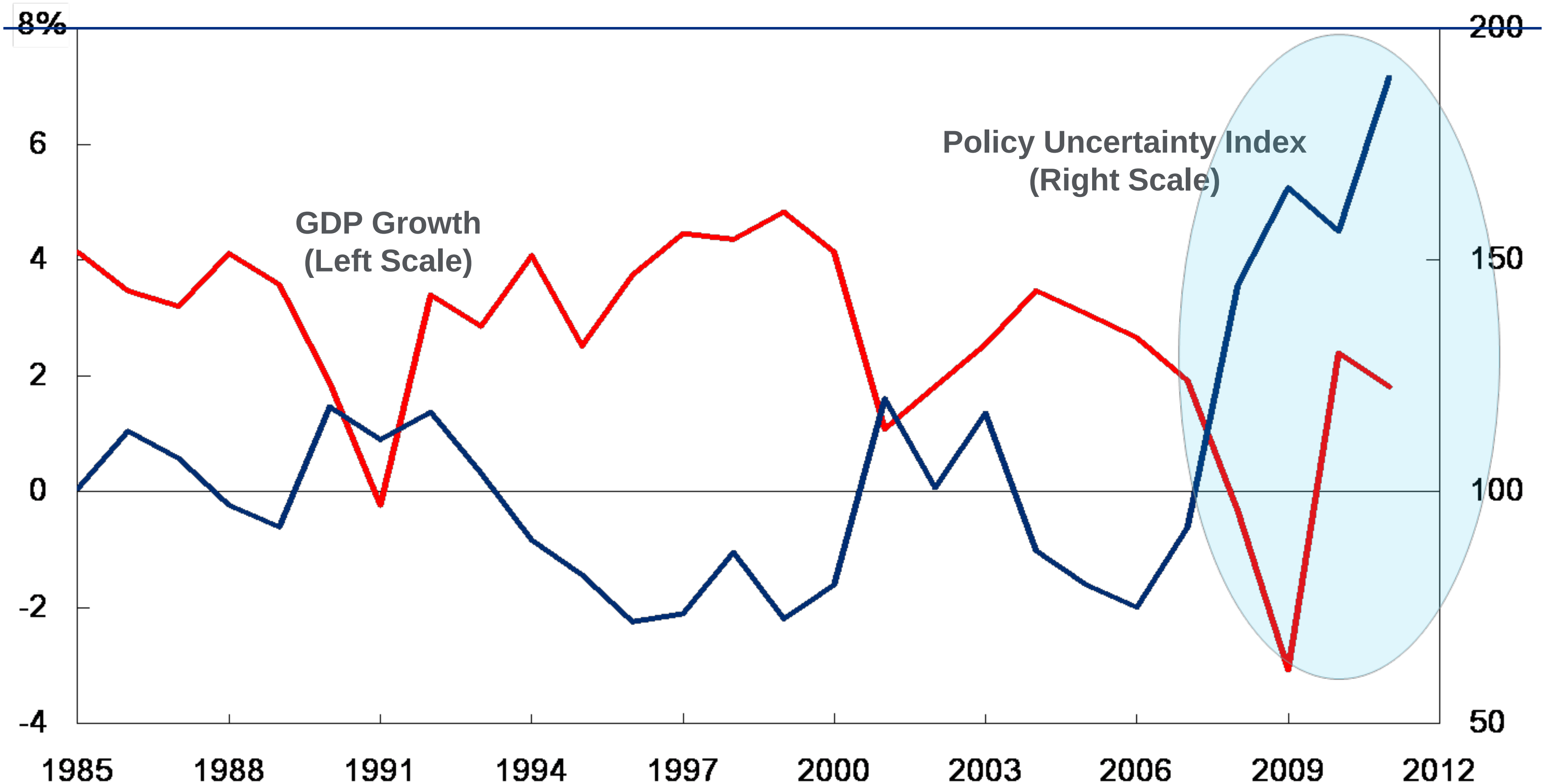
Rising Policy Uncertainty Weighing On U.S. GDP Growth

Index of policy uncertainty that is negatively correlated with GDP growth has spiked to historically high levels.



Sources: BEA, Stanford University, and Haver. Uncertainty Index is developed in Scott R. Baker, Nicholas Bloom and Steve Davis, "Measuring Economic Policy Uncertainty", (2012), Stanford University unpublished paper. GDP and Index data distributed with permission by Haver

Global Risks and Vulnerabilities Have Worsened

- **Global Growth Prospects are Deteriorating**
  - Euro Area crisis intensifies recessions (especially in EA periphery), strains banking and financial sectors, and weakens fiscal positions.
  - Financial market and sovereign debt strains are rising again despite additional central bank policy-easing measures globally (in Advanced and Emerging Economies).
  - Official focus on nominal fiscal targets risks inducing excessive fiscal tightening if growth weakens.
- **Political Consensus Lacking for Needed Structural Measures to Ease Euro Area Crisis**
  - Current policy mix of central bank liquidity, fiscal austerity, and growth-oriented supply side structural reforms may not be enough to stabilize Euro Area economies nor ensure viability of currency union.
  - Banking union requires implementing pan-Euro Area deposit insurance, bank resolution, and bank recapitalization mechanisms.
  - Fiscal integration: ratification and credible implementation of Fiscal Compact.
- **Emerging Economies Slowdown Widespread but Growth Outpaces AE**
  - Past tightening, adverse EA spillovers, and slow pace of policy stimulus contribute to slowdowns in BRIC and other Emerging Economies.
  - China growth slows to 7.8% in 2012 as policy attempts to rebalance economy toward domestic consumption.

Euro Area Crisis: Confluence of Multiple Headwinds

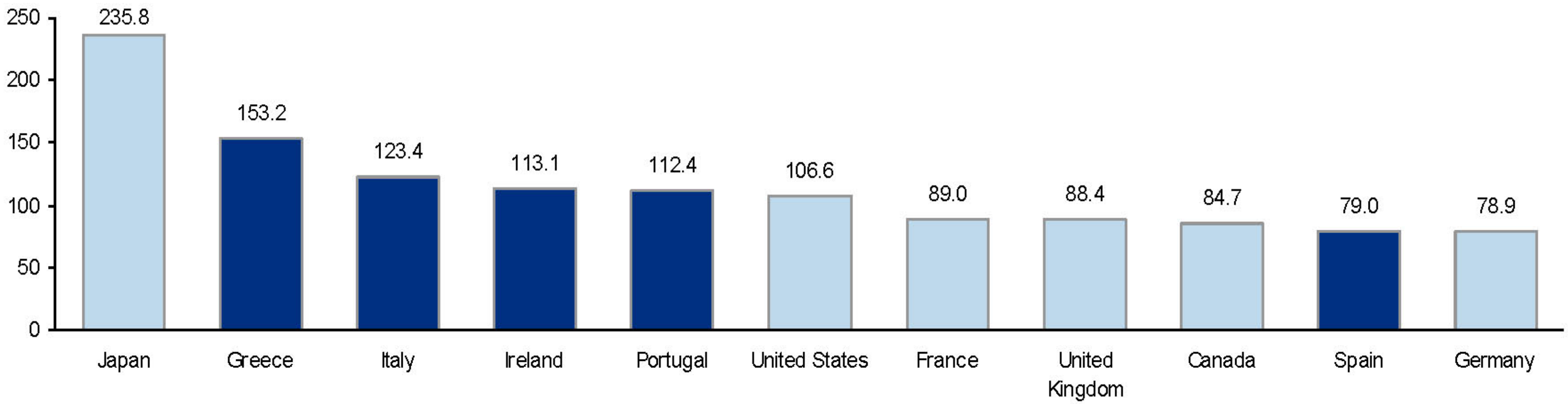
- **Sovereign Debt Crisis**
  - Decade of Increased Leverage "Artificially" Boosted Expenditures and Growth
  - Fiscal Austerity Necessary to Deleverage (and maintain sustainable debt/GDP)
    - Deleveraging is Drag on Economic Growth
    - Slow Growth Worsens Sovereign Crisis

- **Banking Crisis**
  - Adverse Feedback Loops Between Sovereign Debt and Banking Risks
  - Markets Tank Bank Share Prices, Limit Debt Issuance, Deposit Outflows
    →Banks Rely More on ECB Funding
  - De-Leveraging and Recapitalizing Banks Required to Restore Lending Capacity
  - Global Contagion Effects Euro Area Banking Crisis
  - Global GDP Effects of Euro Credit Crunch
    - Largest for Europe (Advanced and Emerging)
    - Least for North America and Asia

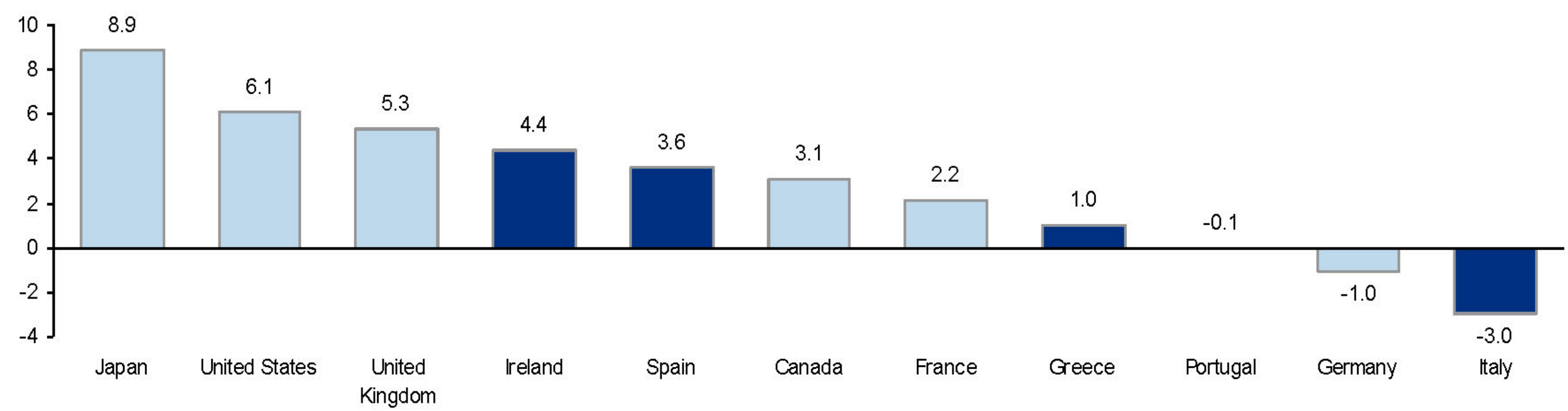
- **External Balance Crisis: Tearing Apart Euro Area**
  - Structural Causes for Loss of Competitiveness Require Structural Solutions
  - ECB Liquidity Buys Time as does Fiscal Compact
  - Structural Policies to Improve Competitiveness Required for Durable Solution

Government Debt and Fiscal Balances for Select Countries

Debt / GDP (%, 2012E)



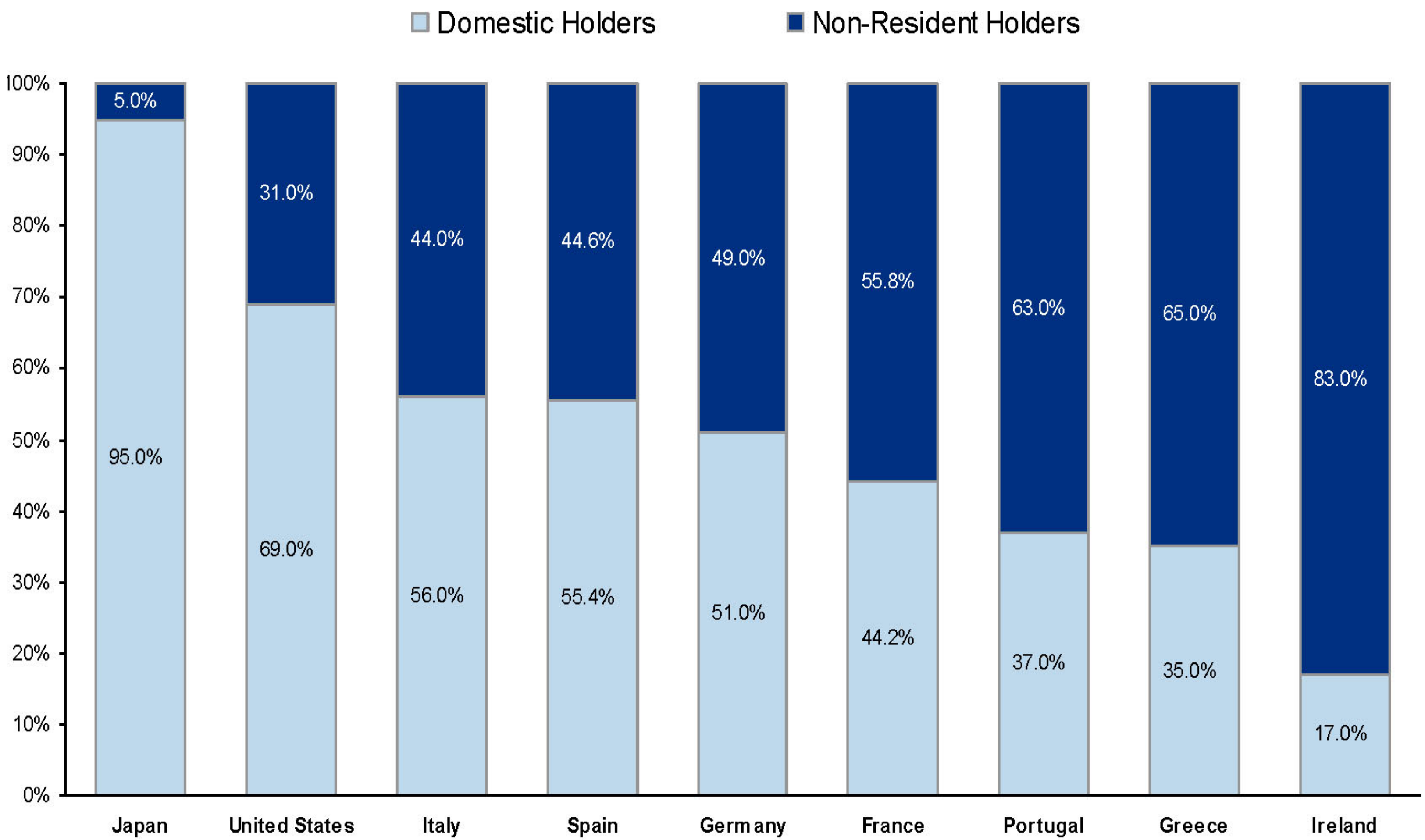
Primary Deficit / GDP (%, 2012E)



2011 Deficit	**10.7**	**9.4**	**8.3**	**13.0**	**8.9**	**4.5**	**5.2**	**9.1**	**4.2**	**1.0**	**3.9**

Source: IMF WEO database April 2012, Citi Research calculations

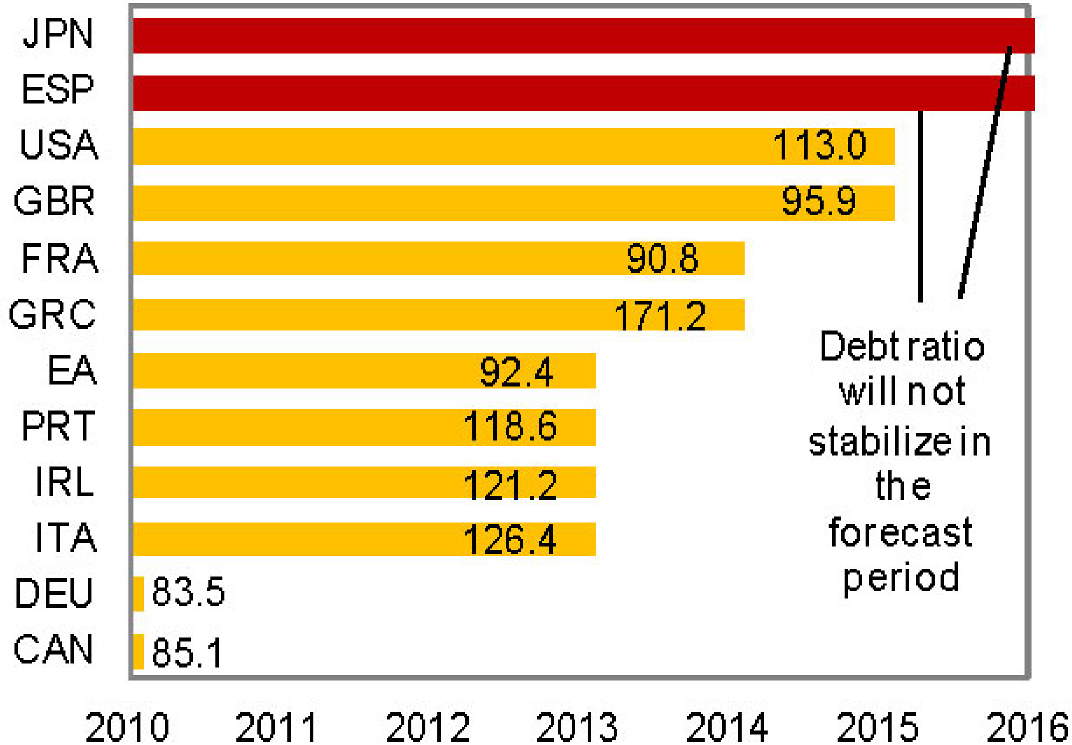
Sovereign Debt Ownership—Domestic and Foreign Shares



Note: Data are 2011Q2 for Greece, Ireland, United States, 2011Q1 for Japan, 2010Q4 for Portugal, France, Italy, and Germany
For US and Japan, Non-Resident holders include foreign official holdings, and for Greece, Ireland, Portugal ECB holdings

Source: IMF Fiscal Monitor, September 2011 and Eurostat

When and At What Levels Will AE Debt/GDP Ratios Peak?



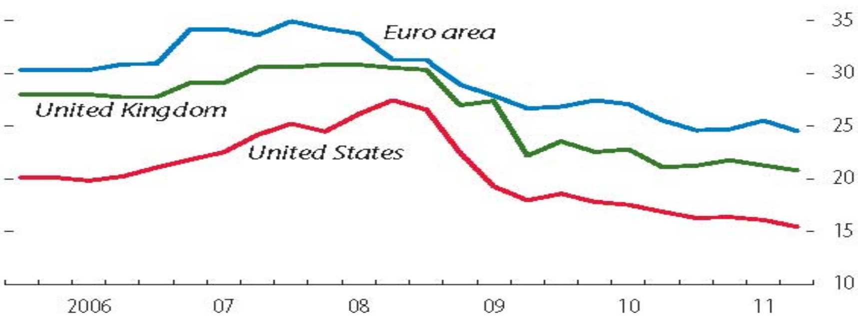
Sources: IMF staff estimates and projections.
Note: Red bars indicate countries whose debt-to-GDP ratios will not stabilize within the next five years. Numbers in bars refer to the projected peak debt-to-GDP ratio. EA refers to the euro area average.

Source: IMF Fiscal Monitor Update July 16, 2012

Euro Area Banks Still Leveraged and Vulnerable

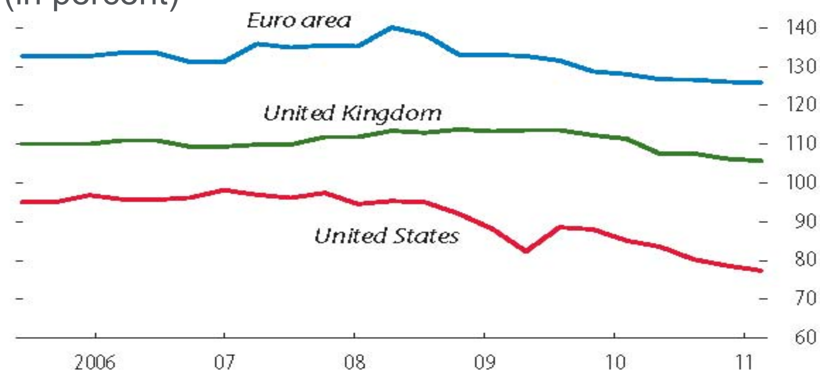
Dependence on Wholesale Funding and Deposit Outflows Risks Credit Crunch

Bank Leverage
(Adjusted tangible assets to Tier 1 Capital)



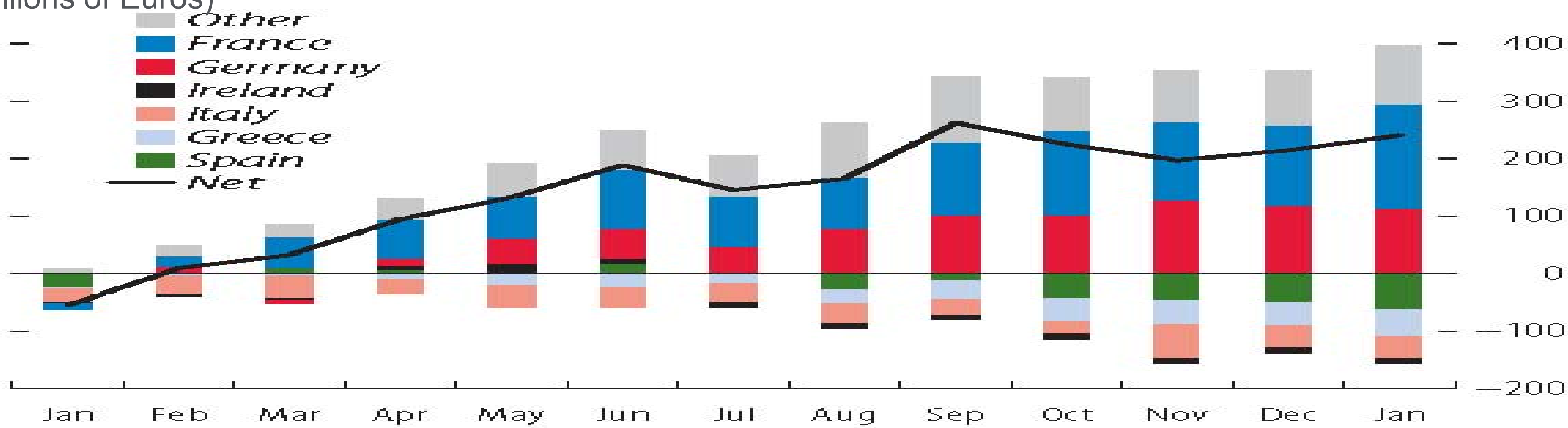
Sources: SNL Financial; and IMF staff estimates.
Note: Tangible assets are adjusted by subtracting derivatives liabilities from tangible assets of European banks. However, some accounting differences may remain. Based on large banks in each economy.

Bank Loan-to-Deposit Ratio
(in percent)



Sources: SNL Financial; and IMF staff estimates.
Note: Based on large banks in each economy.

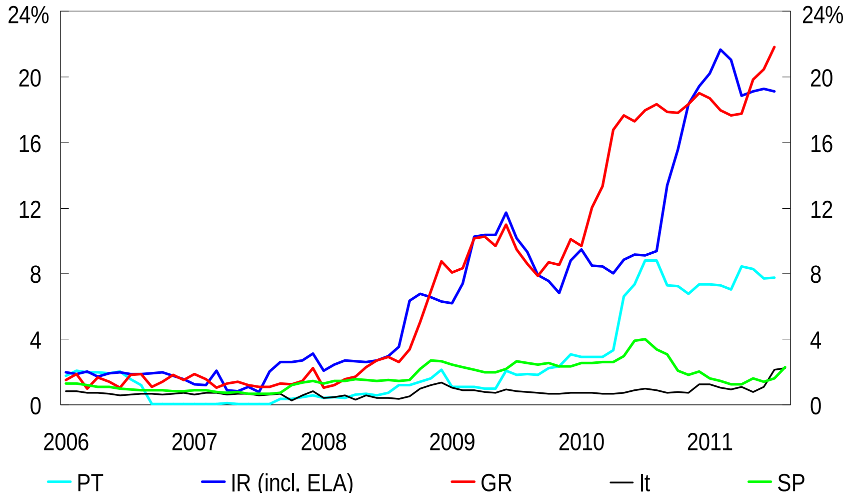
Cumulative Euro Area Deposit Flows 2011-12
(Billions of Euros)



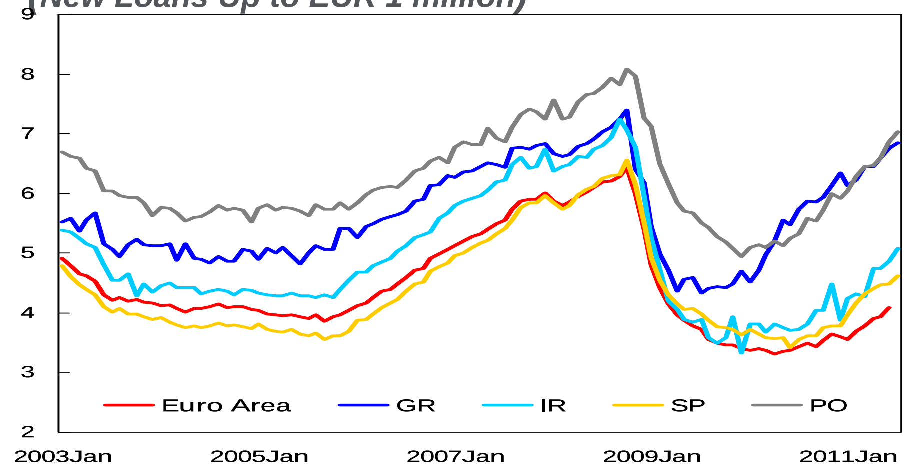
Source: IMF Global Financial Stability Report, April 2012

Deleveraging and Weakened Bank Funding Capabilities Tighten Lending

Banks' Use of ECB Open Market Operations as a Share of Total Assets

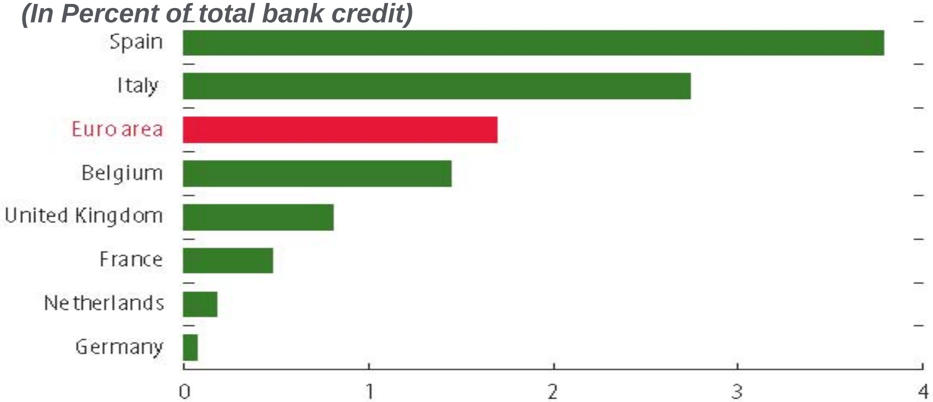


Bank Lending Rates To Non-Financial Corporations (New Loans Up to EUR 1 million)



Reduction in Credit over 2 years under Current Policies

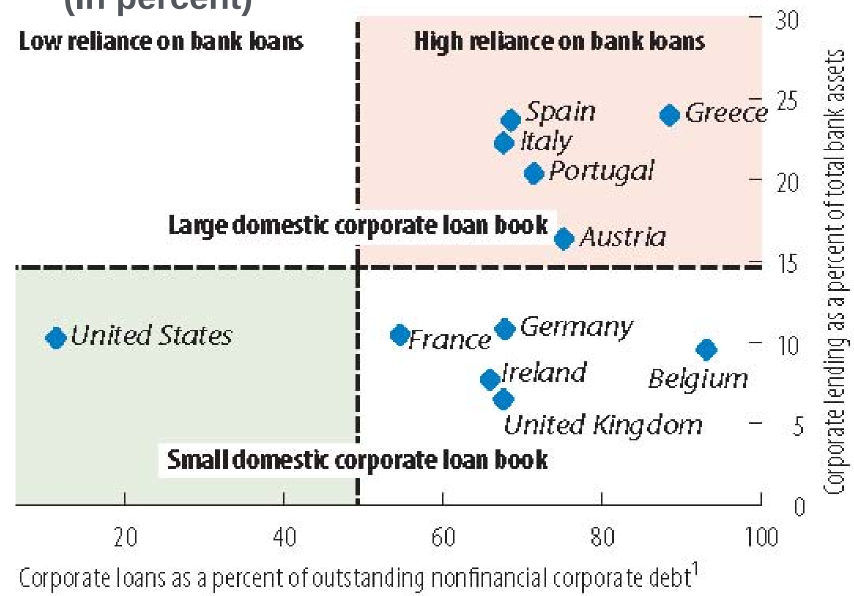
(In Percent of total bank credit)



Source: IMF staff estimates.

Note: Data are an extrapolation of results from a sample of banks to the entire banking system. Total bank credit includes domestic and direct cross-border credit supplied by banks in each country.

Corporate Reliance on Bank Financing (In percent)

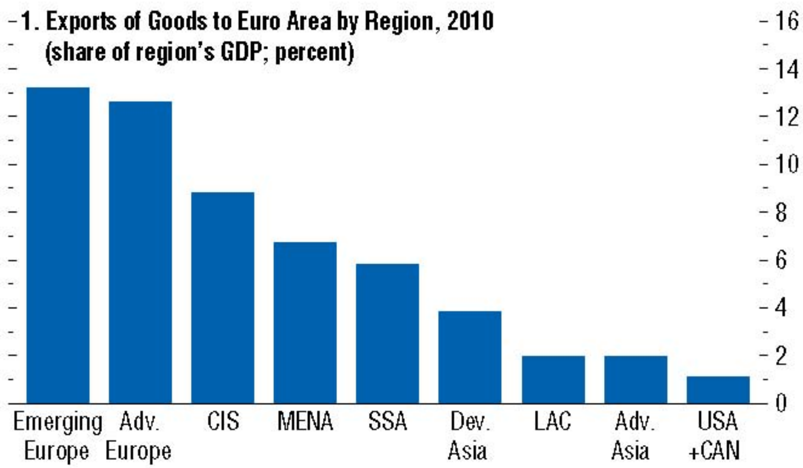


Sources: IMF GFSR April 2012, Eurosystem and CIRA.

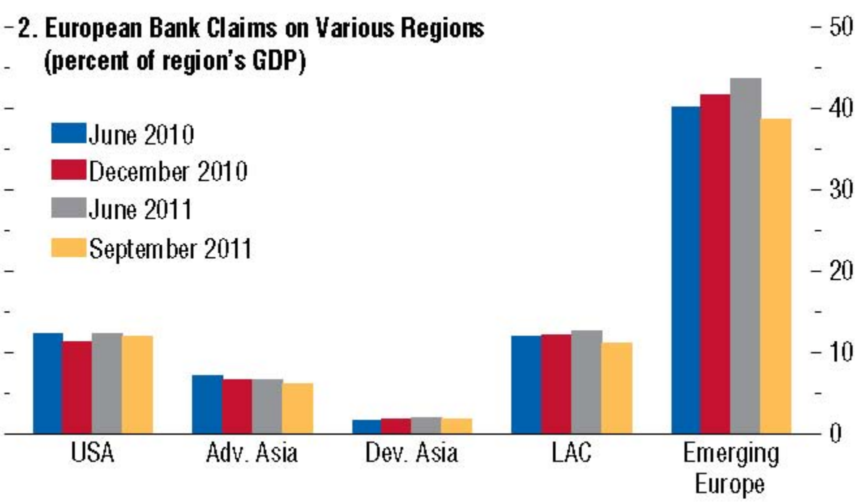
Contagion From Intensified Euro Sovereign/Bank Crisis

Sharp drop in EA credit growth slows GDP globally through trade and bank linkages

Trade Linkages



Banking Linkages

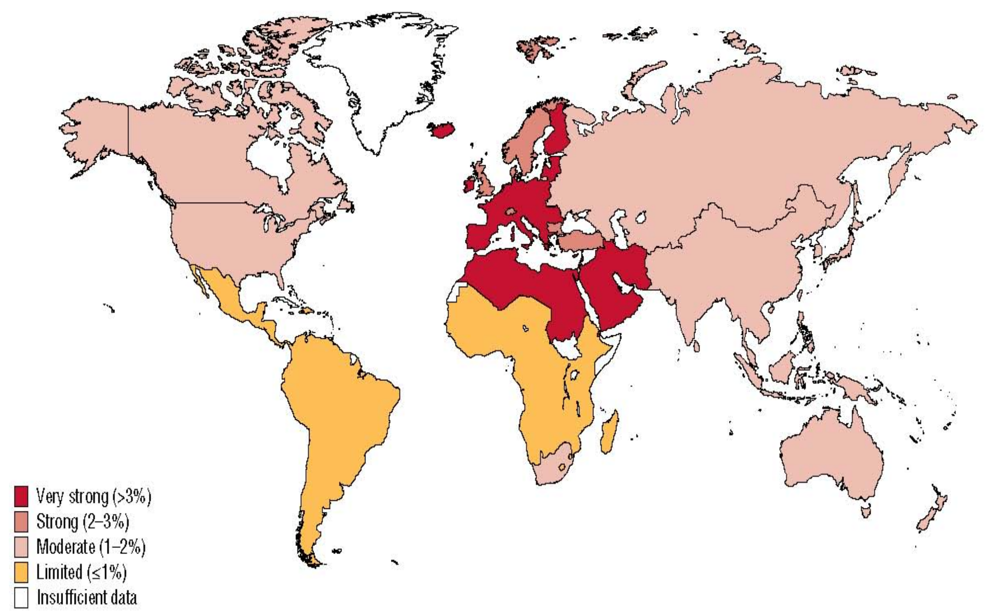


Banks raise capital buffers with less lending and asset sales

Feedback loops raise risk spreads, bank funding costs, fiscal vulnerabilities, and slow domestic demand in Euro Area

Trade linkages strongest within Europe, then EEMENA. Links relatively weak for Asia, the U.S., and LATAM

Euro Area banks and their central and eastern European subsidiaries constitute most of the financial transmission



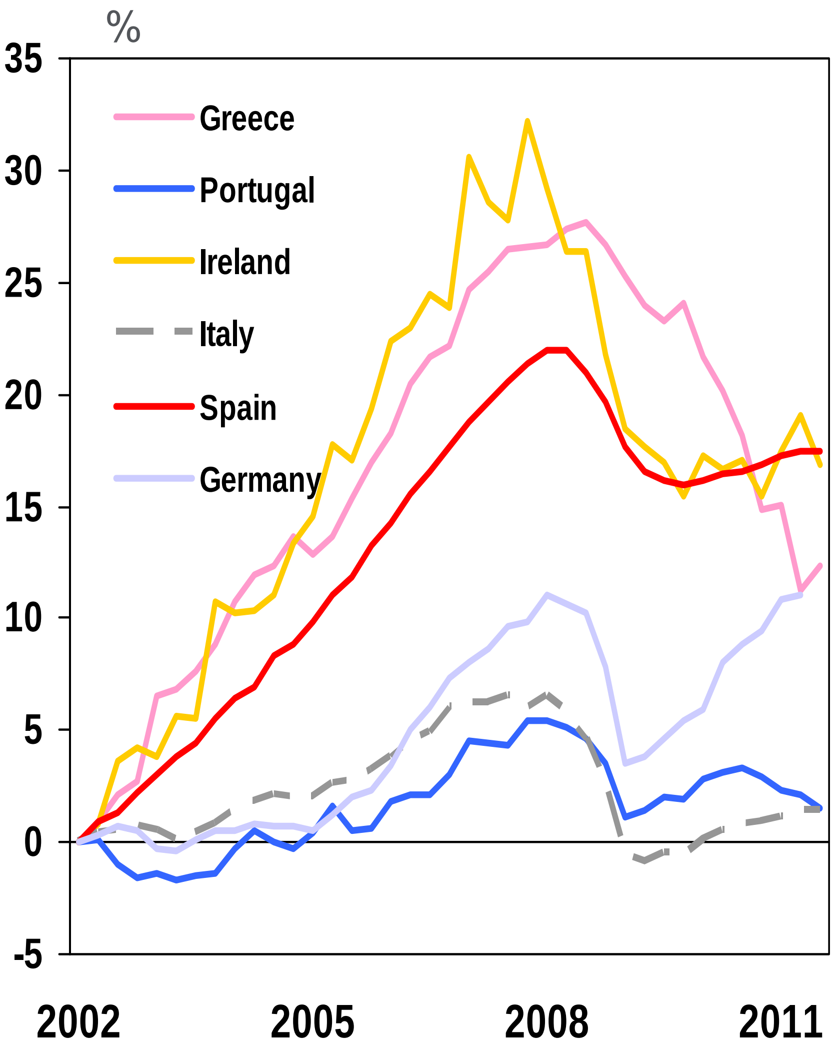
Source: IMF staff estimates.
Note: Peak deviation of output from the WEO baseline under the first downside scenario described in Chapter 1 (increased bank and sovereign stress in the euro area). Simulations were conducted using the IMF's Global Economic Model, which is a six-region model (supplemented with satellite models) that does not explicitly model individual countries (except the United States and Japan).

Source: IMF World Economic Outlook April 2012

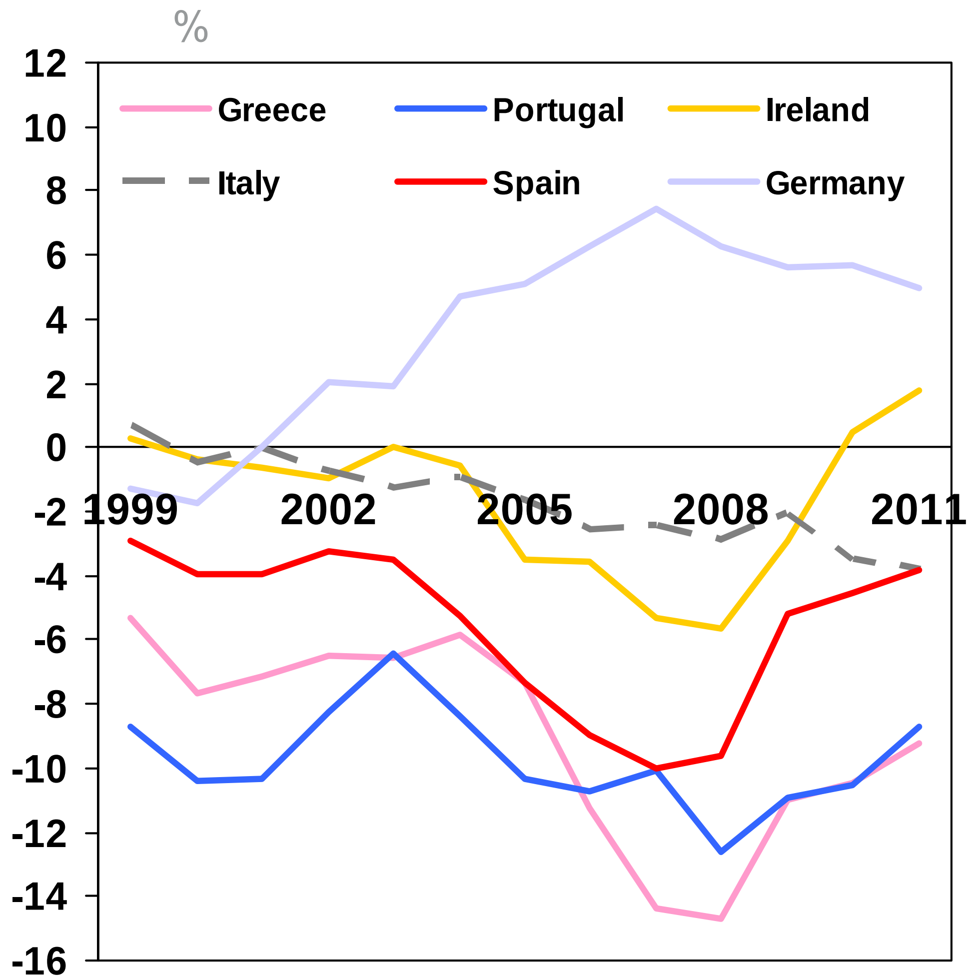
External Imbalances Crisis

Economic Divergence Highlights Imbalances Among Euro Area Countries

Change in Real GDP Since Q1-2002



Current Account Balances as Pct GDP



Sources CIRA, Eurostat

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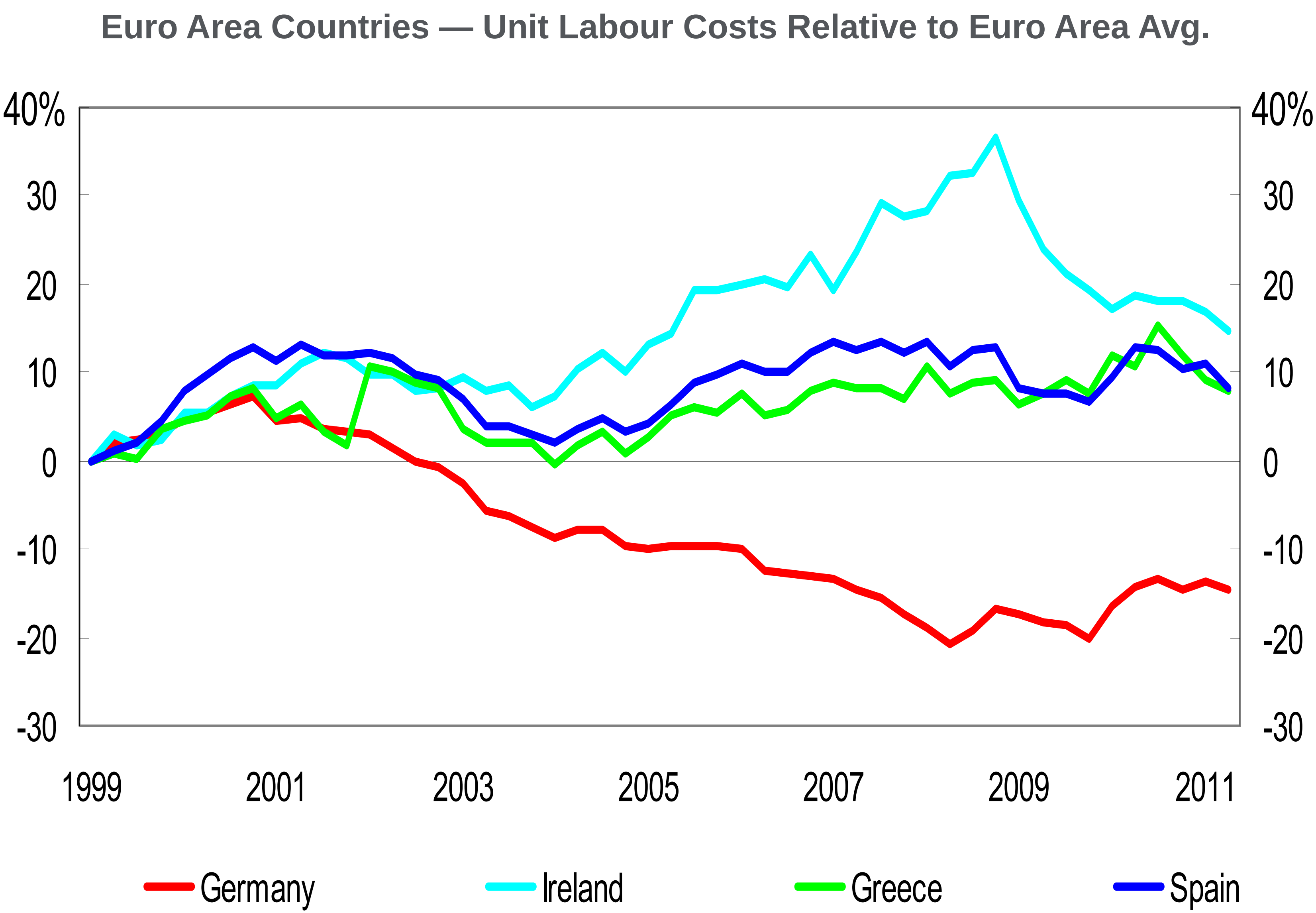
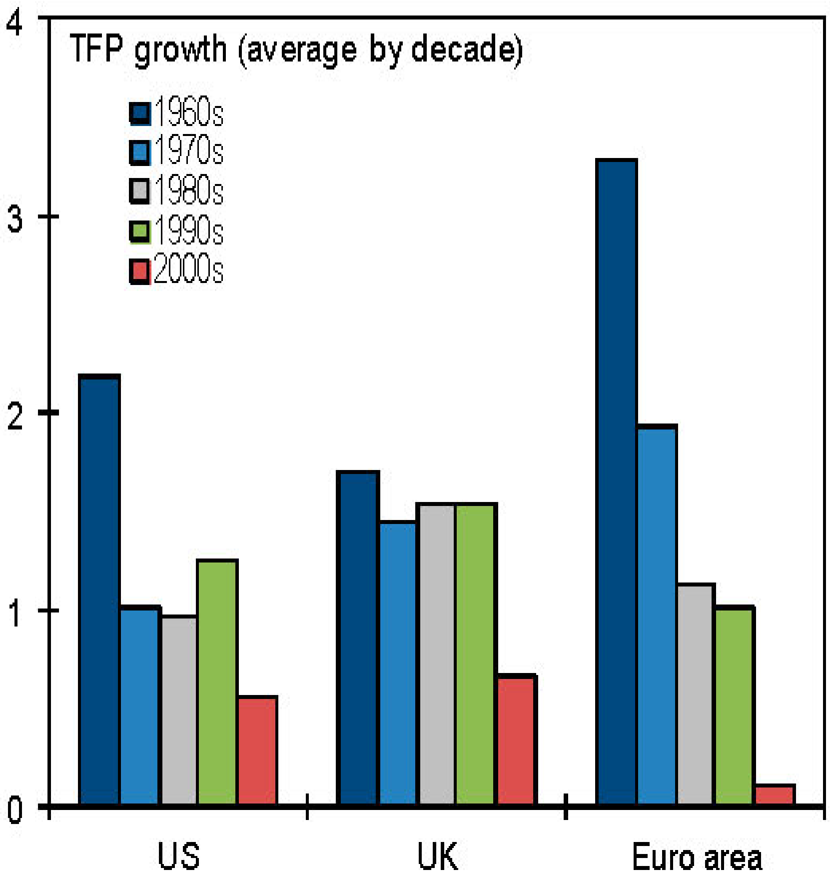
Range of Competitiveness Among Euro Area Countries

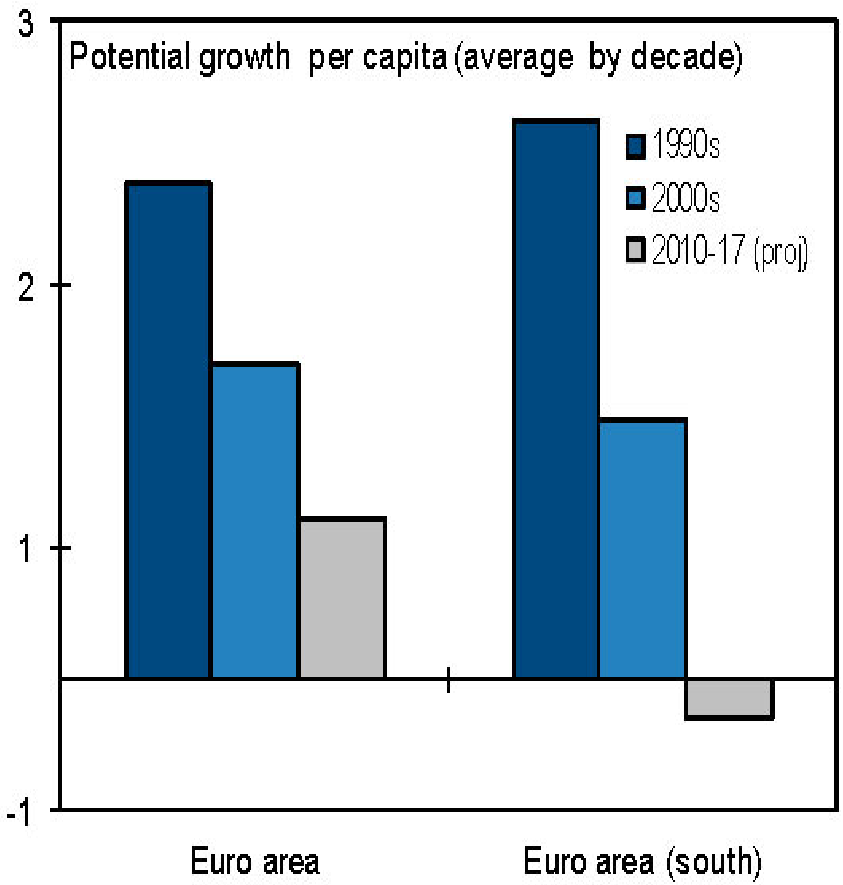


Source: ECB and Citi Investment Research and Analysis

Euro Area Productivity and Growth has Slowed

Potential GDP Growth Most Affected in "Southern Core" (in percent)



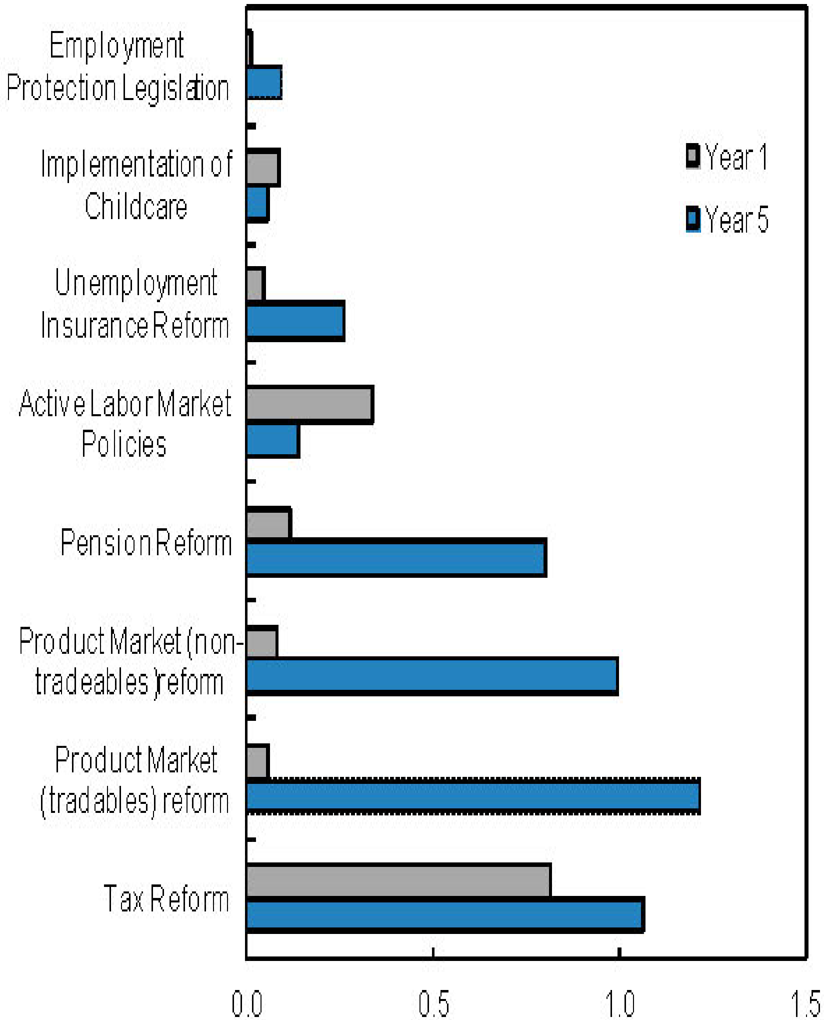


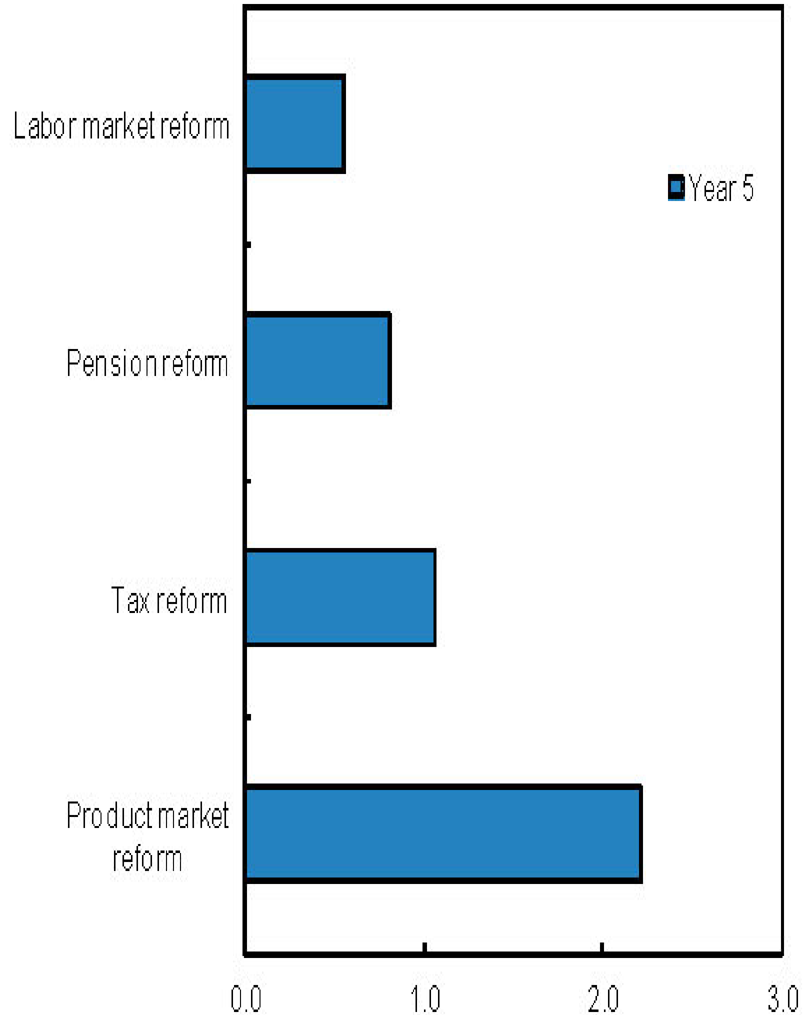
Source: April 2012 WEO, European Commission.

Source: "Fostering Growth in Europe Now" IMF Staff Discussion Paper SDN 12/07 June 2012

Impact of Alternative Structural Reforms on Euro Area Growth

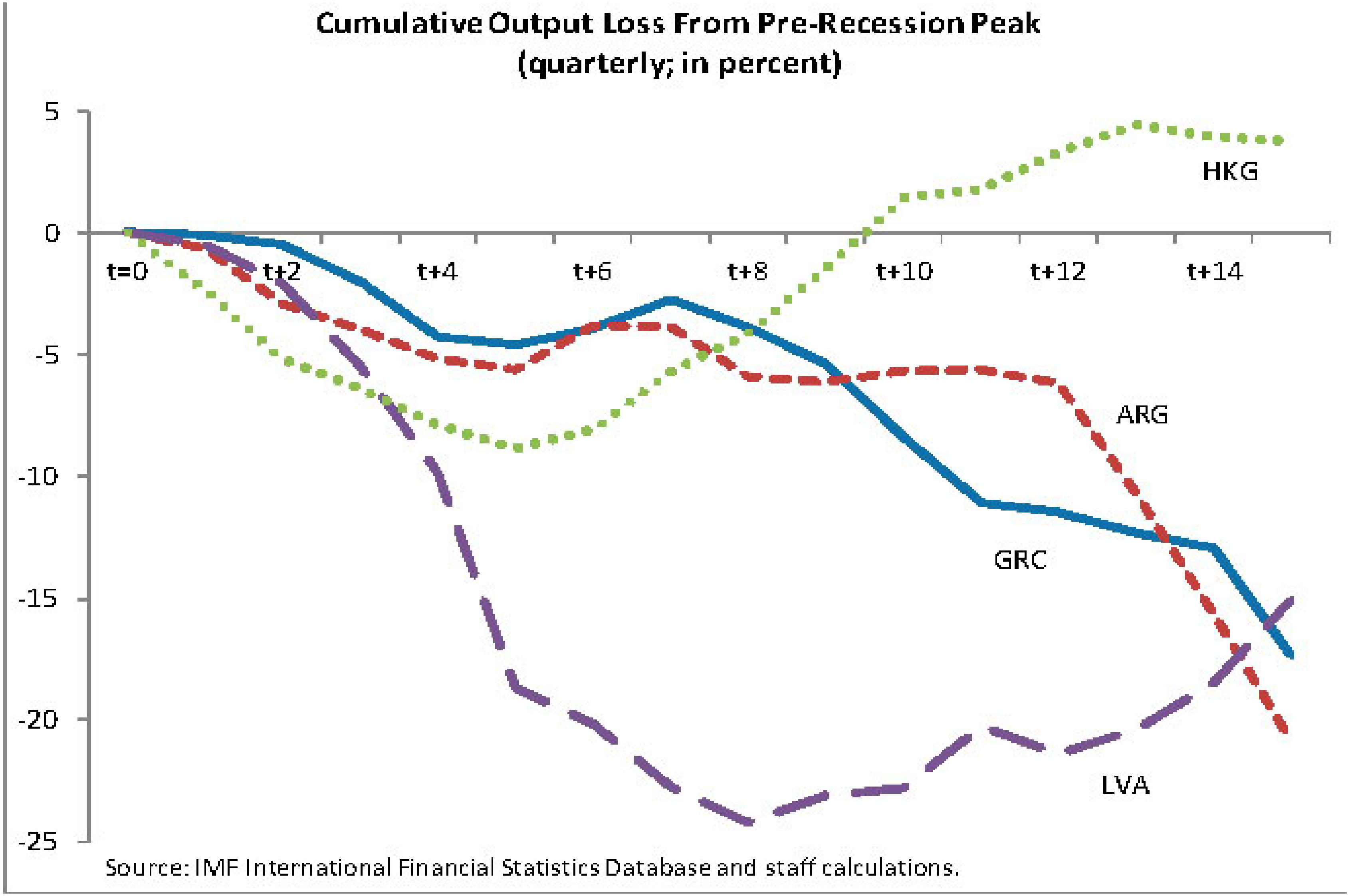
Immediate and Cumulative Effect on GDP (in percent)





Source: "Fostering Growth in Europe Now" IMF Staff Discussion Paper SDN 12/07 June 2012

Internal Devaluation Almost Always Prolongs Recession



Source: IMF Greece Staff Report, IMF Country Report 12/57 March 2012

Mitigating Impact and Transmission of "Grexit" Shock

Liquidity:
- Crisis Mgmt
- Only buys time
- Fleeting impact unless fundamentals addressed

Banking Union:
- Limits contagion
- Prevent Balkanization of EA banks

Structural reforms:
Requires time to enhance GDP growth

Risk replay of Maastricht debate:
- Germany wanted convergence first
- France wanted Euro benefits
- Now higher political risks from "fringe"

Acting Entity	Possible Measures to Mitigate Impact of Grexit	Likelihood	Market Impact
European Central Bank	LTROs	1	1
	Relaxation of collateral	1	1
	Refinancing rate cut	2	3
	Deposit rate cut	2	3
	Permanent Reactivation of Securities Market Programme	3	3
	Accepting ESM as counter-party for Open Market Operations	4	1
EFSF/ESM	Primary and secondary market purchases of sovereign debt	1	1
	Euro Area deposits guarantee (including currency re-denomination risk)	3	2
	Euro Area bank recapitalisation scheme	3	1
	Second bailout programmes for Portugal and Ireland	1	3
	Programme for Spain	2	2
European Council	Structural reforms, further liberalisation of product and labour markets	1	5
	Relaxation of fiscal tightening requirements	2	2
	Joint and several guaranteed uncapped Eurobonds	5	1
European Commission	Structural funds, cohesion funds, project bonds	1	5
EIB	Additional lending in terms of infrastructure and energy-related projects	1	5

Note: the "Likelihood" and "Market Impact" columns uses values ranging from 1 to 5, with 1 representing the most likely / more effective and 5 the least likely / less effective.

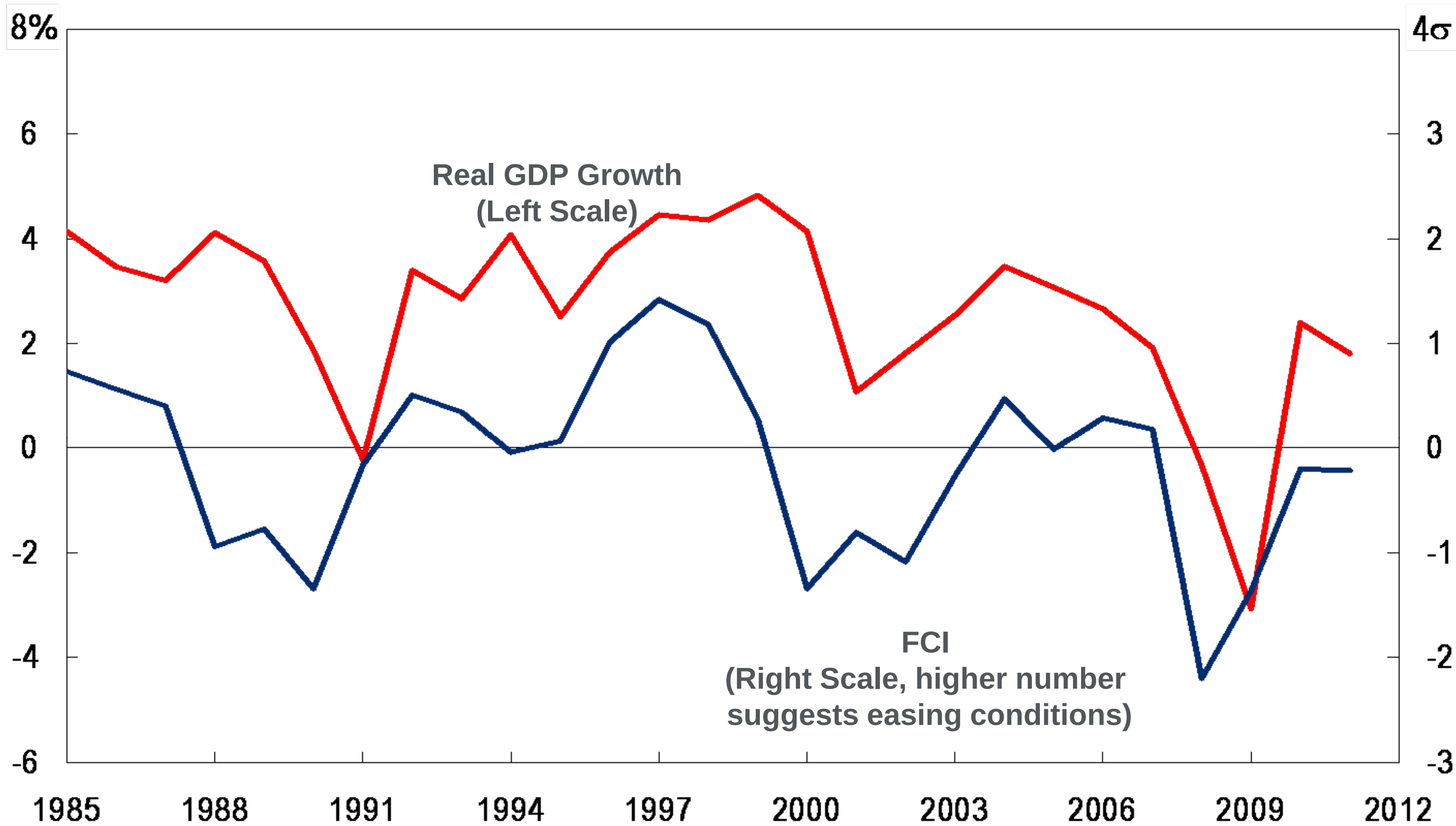
Source: Citi Investment Research and Analysis

Two Other Key Global Strategic Trends and Developments

- **Advanced Economies Continue on Tepid Growth Path**
  - Excessive leverage, Euro Area uncertainty, and US fiscal cliff are major headwinds restraining Advanced Economy growth
  - Central Bank liquidity injections (via Operation Twist, QE. LTRO, or other balance sheet activities) can only buy time (when they work)
  - Policy uncertainty weighs on growth
- **Global Growth Opportunities (especially in EM) are Dynamic**
  - Dramatic ongoing EM transformations imply business strategies must remain adaptive and be robust to changing economic and financial landscape
  - China's policy shifts aim to re-engineer its growth model
  - Sources for China's future growth will have a domestic focus
  - Asia best positioned to capitalize on new growth opportunities

Stable Financial Conditions are Key to Sustaining Expansion

Citi's proprietary Financial Conditions Index (FCI) historically leads US GDP growth. The FCI recently is approaching levels consistent with roughly trend economic growth.



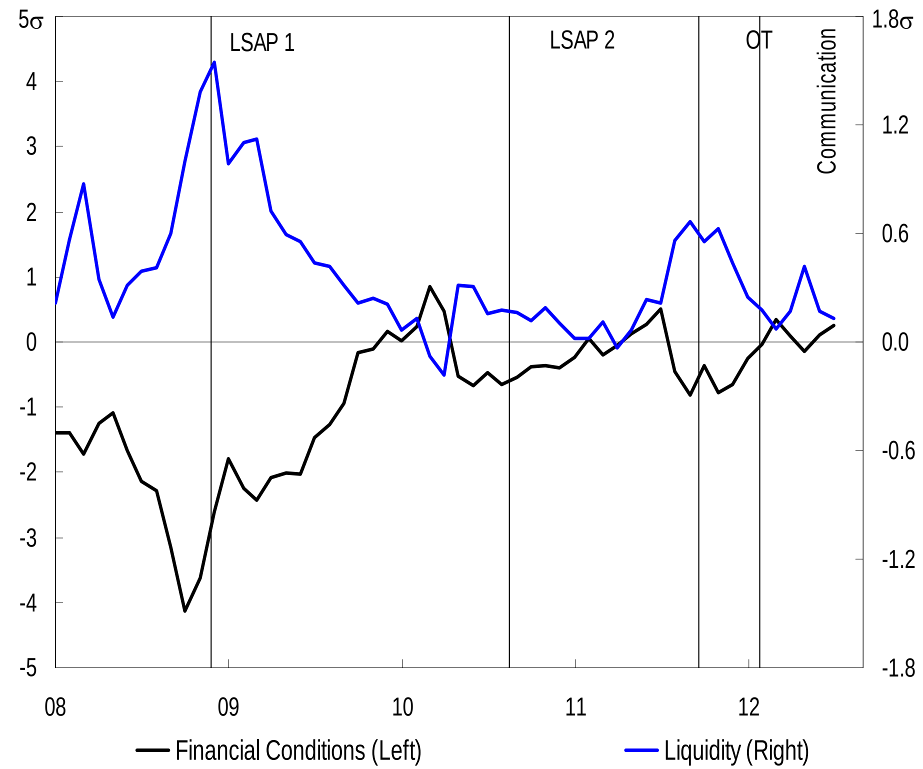
Monetary Policy Uncertainty: Unconventional Fed Policy

The lift to financial conditions and liquidity from zero-bound policies was unambiguous early on. Subsequent measures have buoyed markets but conditions are not providing the financial tailwind associated with massive accommodation.

Monetary Policy Easing Measures at the Zero Bound

	Large-Scale Asset Purchases I ("QE")
11/25/08	$500 billion agency MBS
	$100 billion agency debt
3/18/09	Additional $750 billion MBS
	Additional $100 billion agencies
	$300 billion longer-term Treasuries
	Large-Scale Asset Purchases II ("QE2")
8/10/10	Reinvestment of principal payments
11/3/10	$600 billion longer-term Treasuries
	Maturity Extension Program (Operation Twist)
9/21/11	$400 billion 6-30yr. Treasury purchase
	$400 billion 3mo.-3yr. Treasury sales
	Communications
1/27/12	Exit late 2014 or beyond
	2% inflation target

Citi Financial Conditions Index, Citi Liquidity Index and Significant Fed Communication Dates, 2008- Jul 12



Note: The CLX Liquidity Index is derived from volatility-weighted derivatives on interest rates, swap spreads, equity volatility, bond market volatility, and investment grade corporate credit spreads. See Terry L Benzschawel et al, "The CLX: Citi's Market Liquidity Index: Measuring and Hedging Liquidity Risk in Financial Markets" (9 February 2012).
Source: Citi Research.

Source: Citi Research

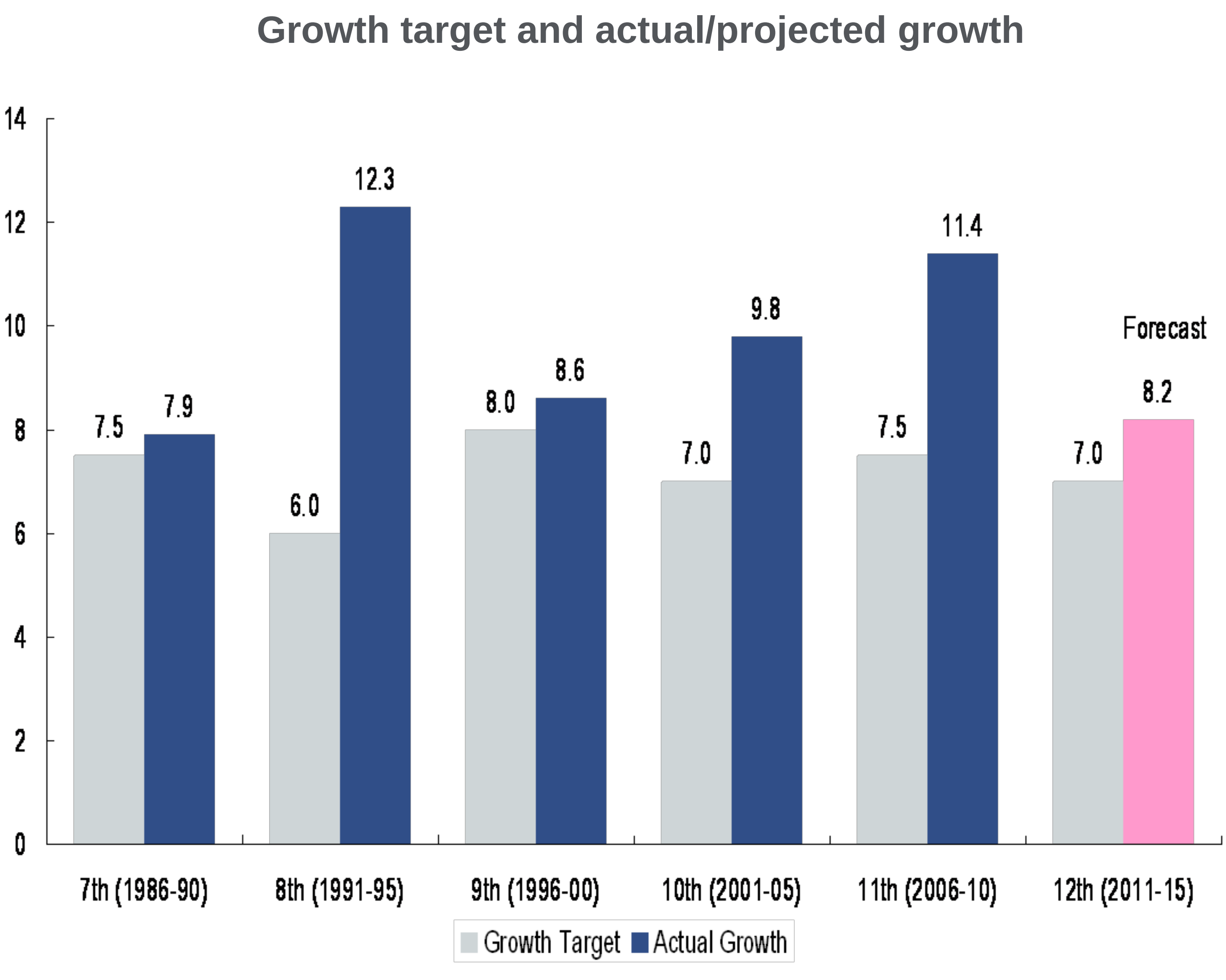
China's New Growth Model

China's Next Transformation: 12th Five-Year (Strategic) Plan

Investment-Driven Exporter Shifts Toward More Domestic Consumption

- **New Growth Drivers**
  - **Domestic Engines:** Raise wages to promote consumption, facilitate social harmony, and improve quality of live with more "green" activities
  - **Restructure and Reinvent Traditional Industries:** Low-end production pressured to innovate by higher wages, and stricter energy efficiency and emissions standards
  - **7 Strategic Industries:** Become global leader in Environmental Protection, Energy Conservation, New Energy Sources, Biotech, Environment-Friendly Transportation, New Materials, Advanced Manufacturing
- **Structural Reform Agenda and Leadership Transition**
  - **Financial Reforms:** coordinated interest rate, exchange rate, and regulatory regime changes (including liberalizing capital account)
  - **Spread Benefits of Growth:** reduce income inequality and improve access to opportunities from more job-creating inclusive growth
  - **Balanced Urban and Rural Growth:** East and the West China
  - **Leadership Mandate and Credibility:** dampens implementation speed. Changes implemented slowly to ensure continuity and stability. Seven out of nine politburo standing committee members to take office in October 2012

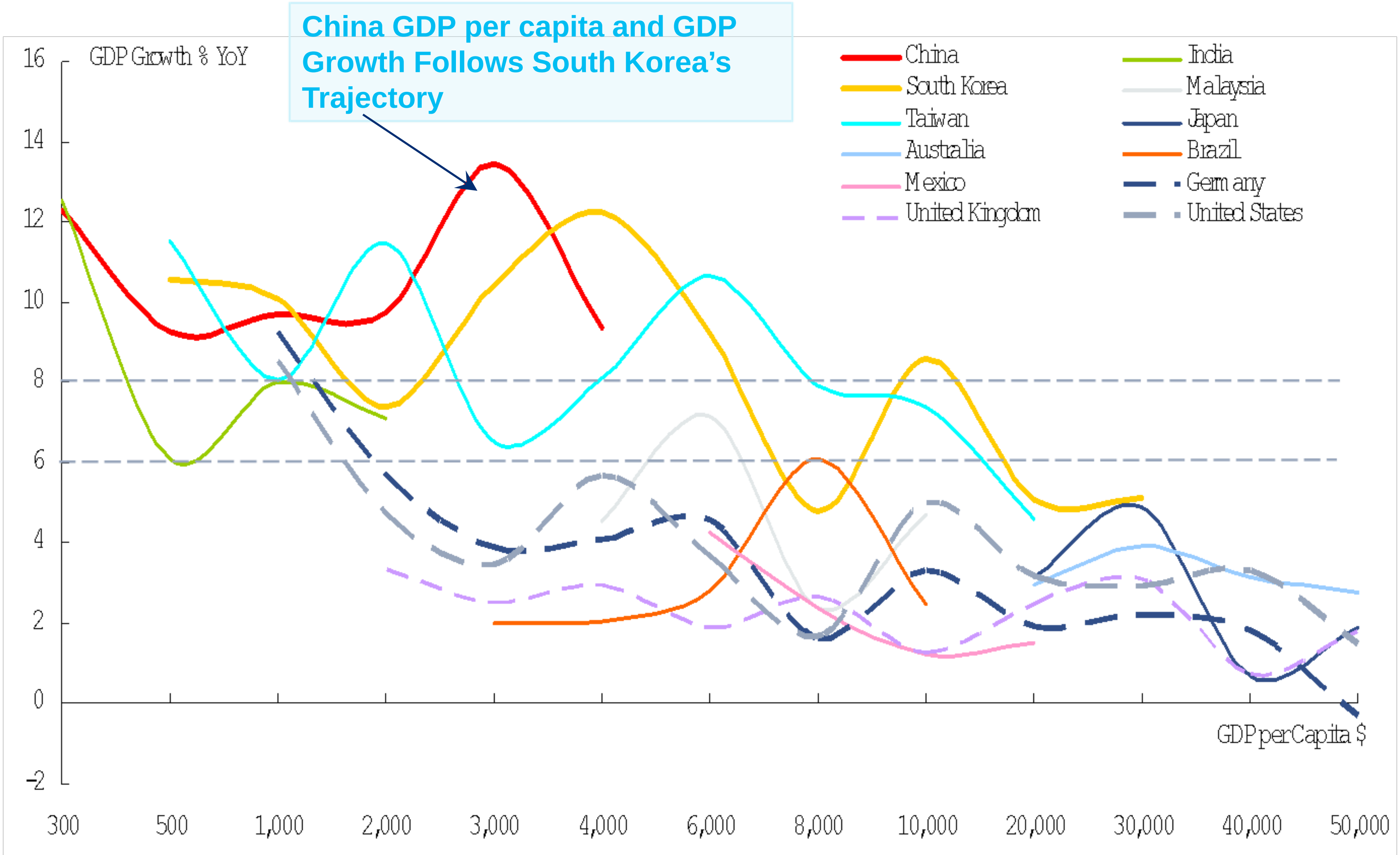
Strategic 5 Year Plan Allows For Lower Growth



Source: CEIC and Citi Research

- **Growth target lowered to average 7 percent in 2011-2015.**
- **Actual growth has always outperformed**
- **China has historically under-promised and over-performed growth targets of 5-Year Plans**
- **Recognizes transition risk from strategic shift toward boosting domestic consumption**

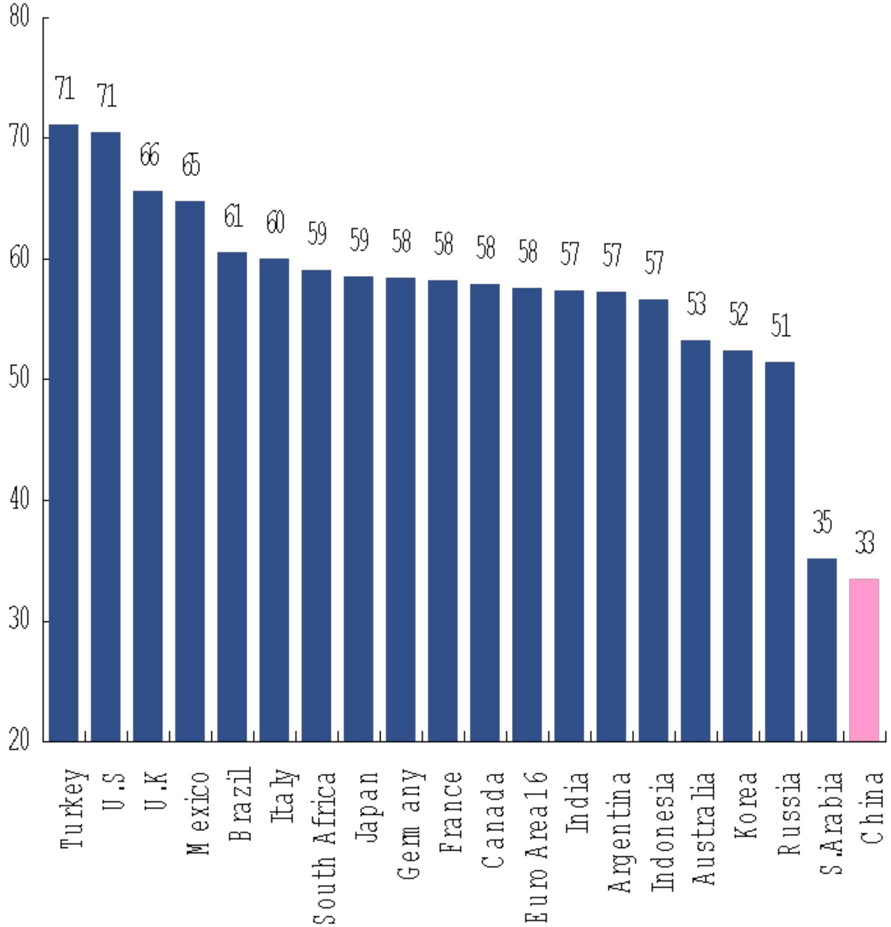
China's Growth Momentum Diminishes As Per Capita GDP Rises



Source: Haver, CEIC, IMF, BEA, Federal Statistical Office of Germany and Citi Research

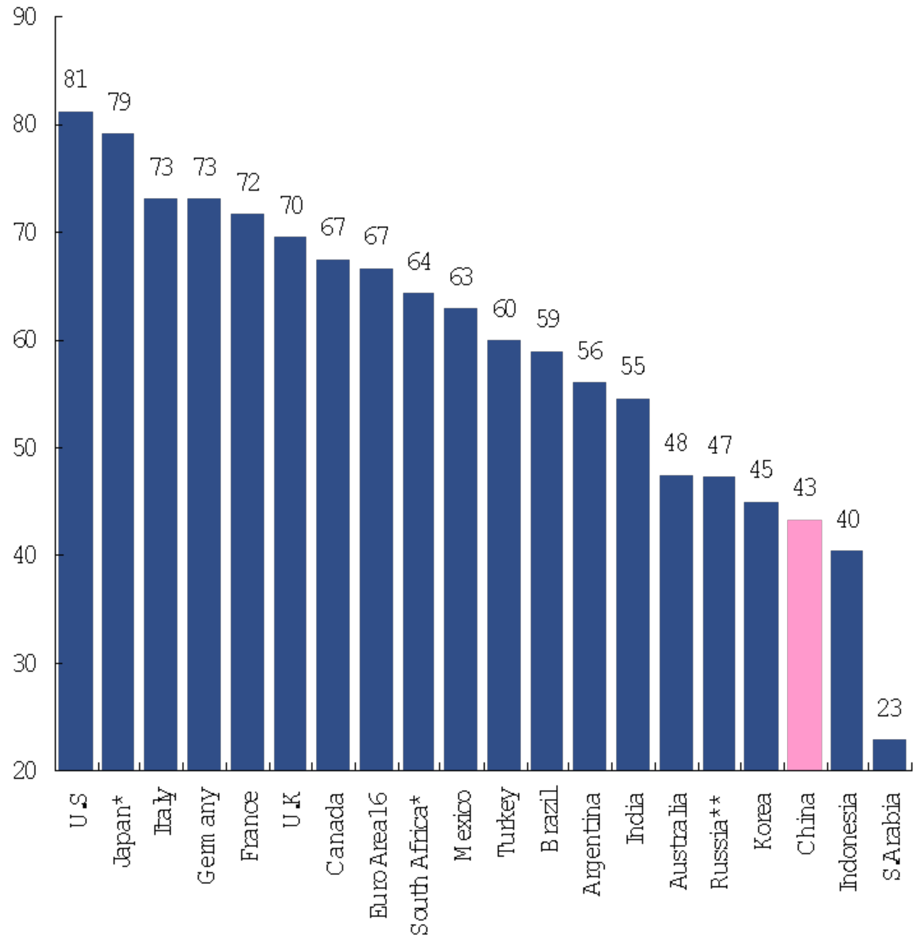
China's Growth is Distorted with Consumption Too Low

Private Consumption Share GDP in G20 (percent)



Source: Haver, CEIC and Citi Research .

Service Sector As Share of GDP in G20 (percent)

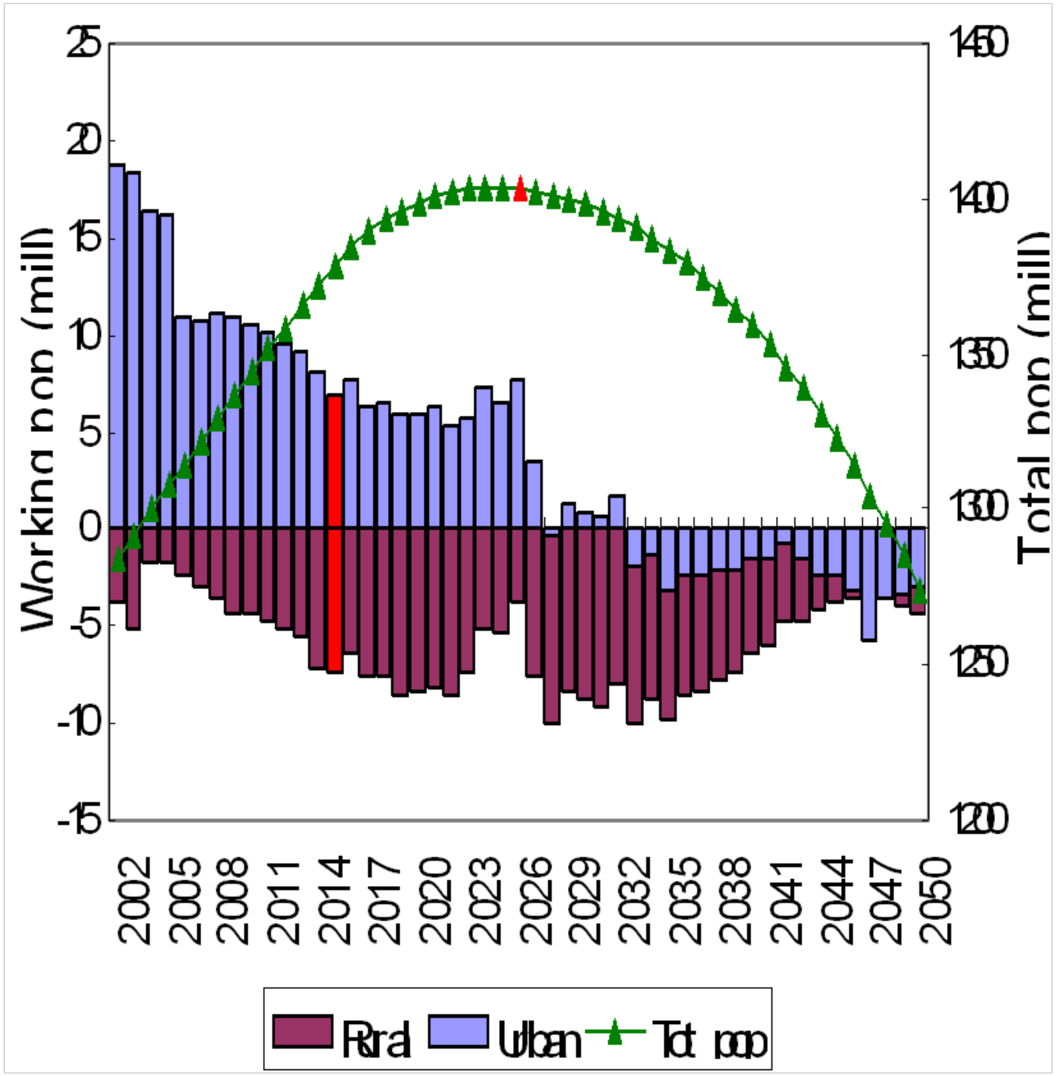


Note: * for 2010; ** for 2007.

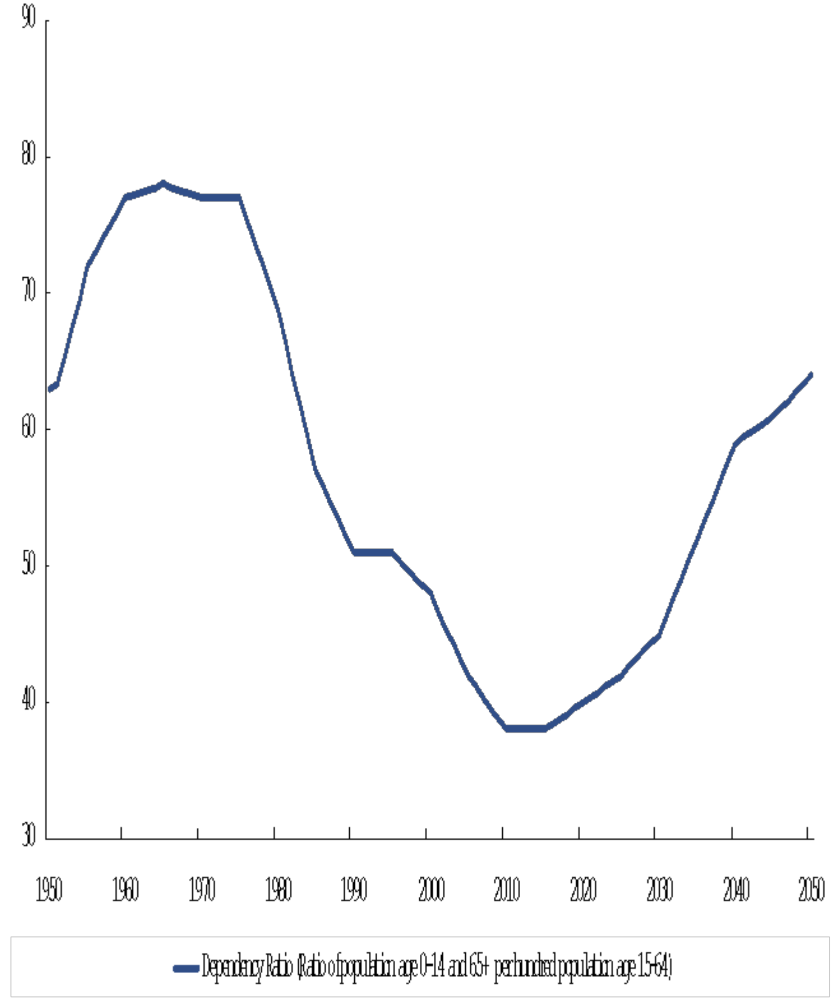
Source: Haver, CEIC and Cit Research.

China’s Demographic, Urbanization Trends Should Limit Growth

Population Growth



Dependency Ratio



Source: UN forecasts and Citi Research.

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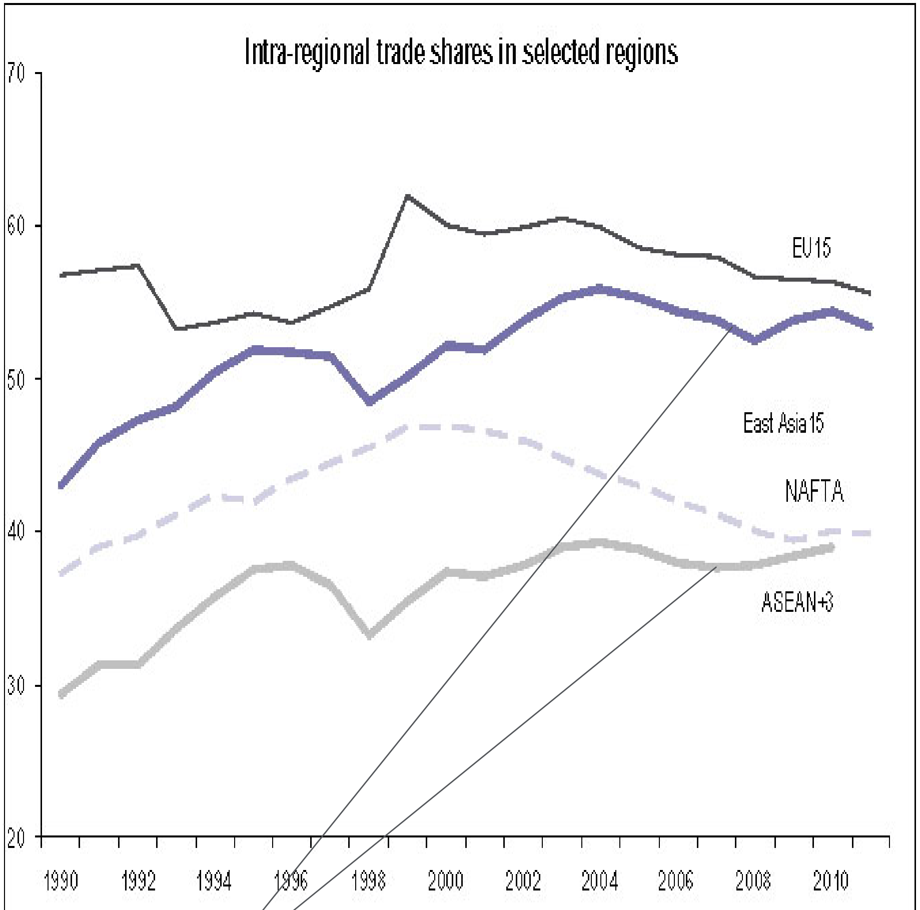
China’s Transformation: Domestic and Global Impact

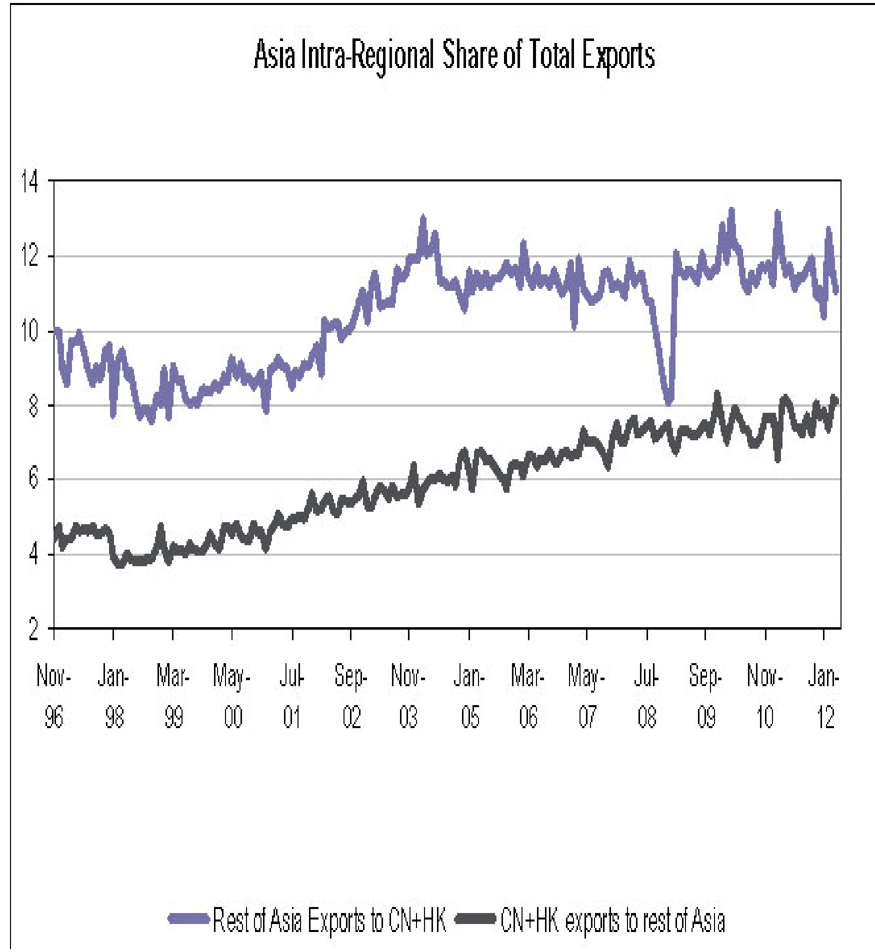
Strategic Opportunities from China's Transition to Consumption

China Rebalancing Away from Investment and Net Exports

- More consumption of domestic services
  - Require secure distribution and payment networks
  - Health care, environmental improvement, and related technology
- Consolidation in traditional manufacturing and investment goods sectors
  - spurs demand for innovations and new technology to keep costs low
  - partnerships with foreign companies
- Internationalization of Renminbi to promote trade and financial flows
  - Capital account liberalization will follow more financial reforms
  - Intermediate goal targets using Rmb for invoicing and settlement
- Greatest Risk is Investment falls but Consumption Does Not Grow

Intra-Asia Trade Fastest Growing Spurred by China Exports



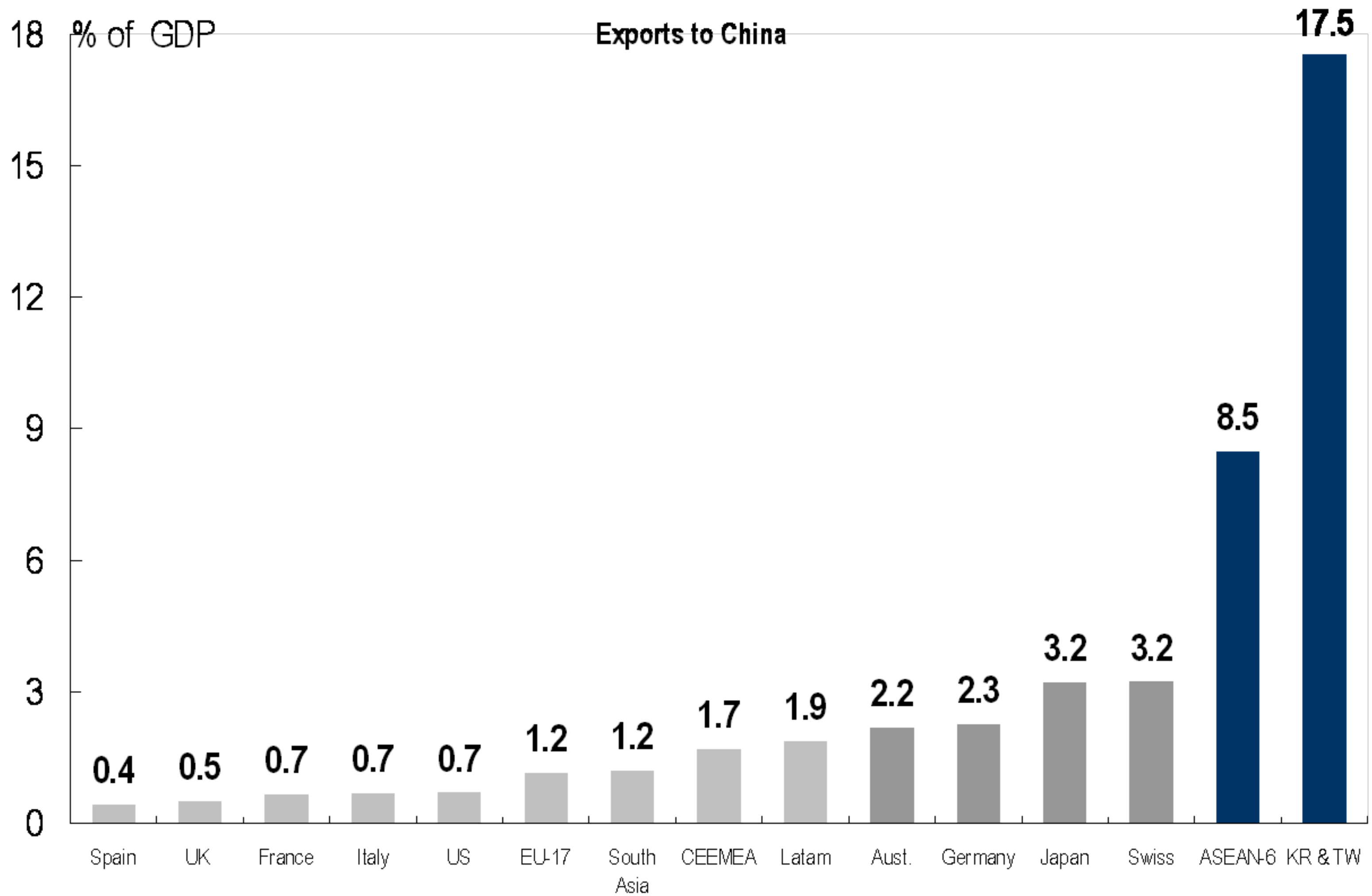


Intra-Asian trade grows faster than NAFTA and EU15

Source: Citi GPS: China and Emerging Markets July 2012

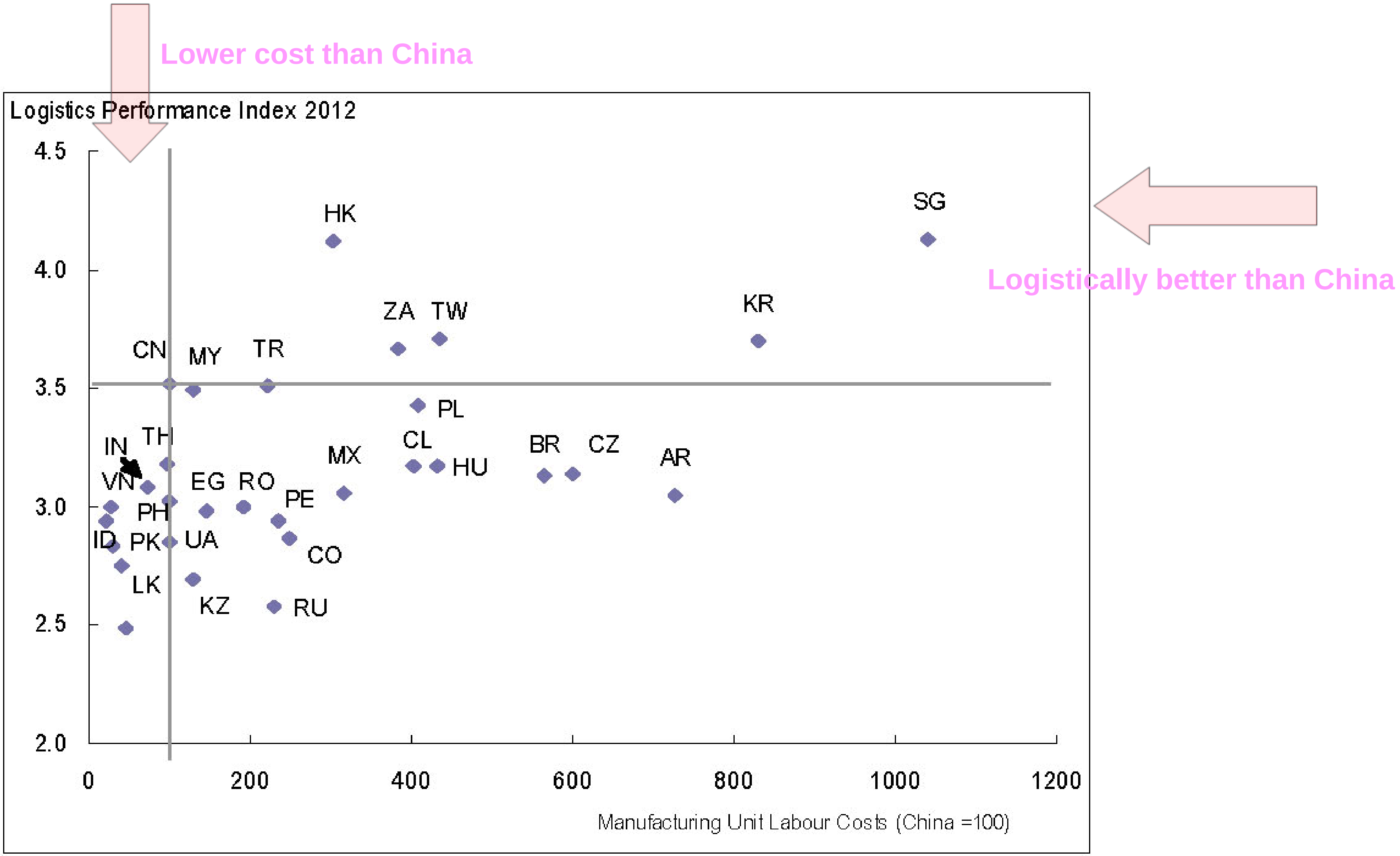
China's Intra-Asia Supply Chain is Large

2010 data



Source: Citi Investment Research, Haver, CEIC

China's Cost And Logistical Advantages are Unequalled



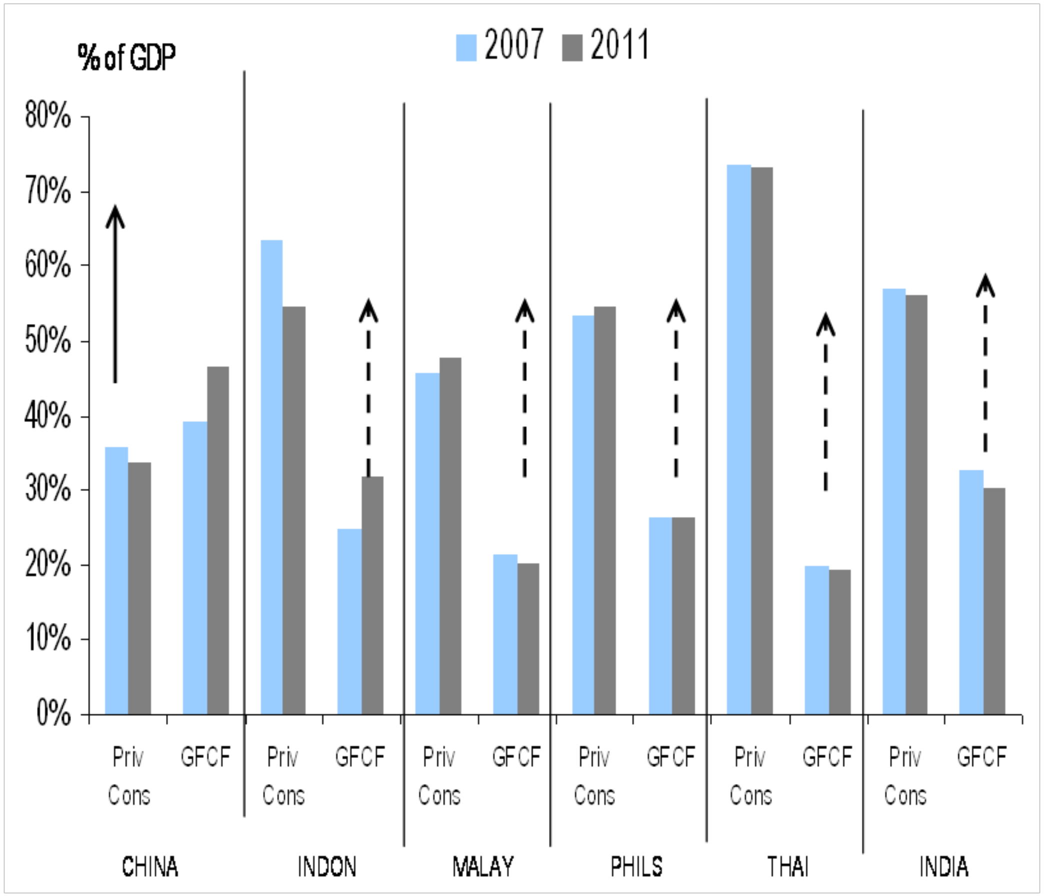
Source: World Bank, EIU, Citi Research

Source: Citi GPS: China and Emerging Markets July 2012

Asia Must Invest More to Sustain Growth as China Transforms

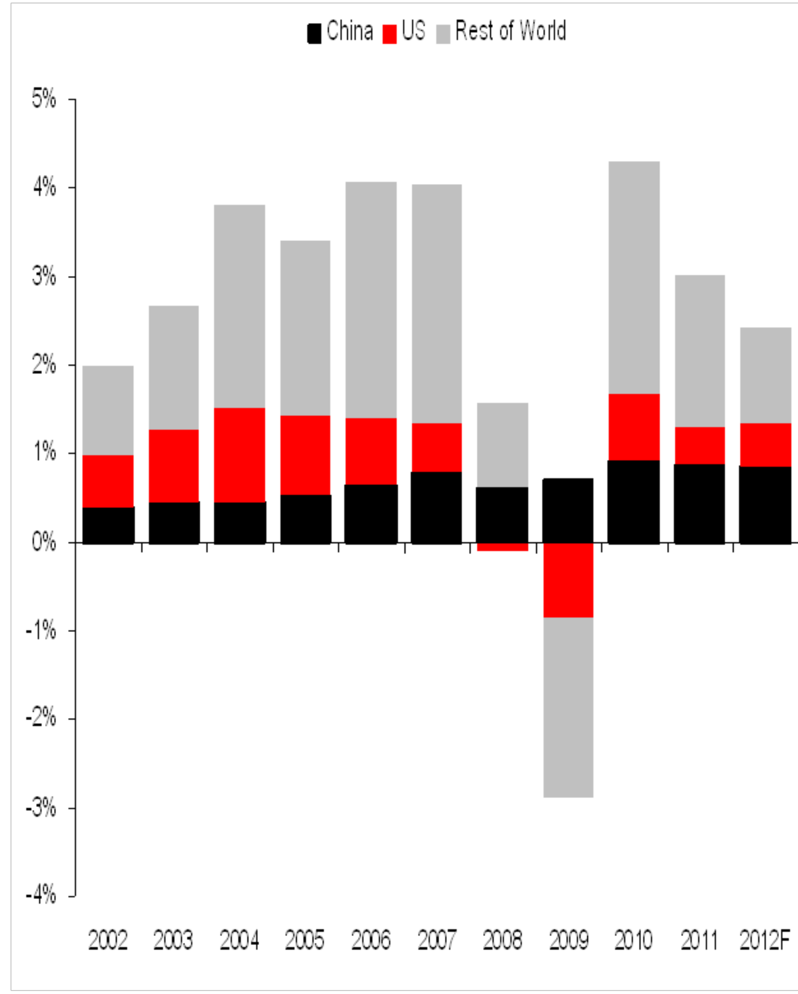
Private consumption and Investment –

China must consume more, and the Rest needs to investment



Source: Citi Research

Contribution to Global GDP growth



Source: Citi Research

Winners and Losers From China’s Transformation

Domestic Implications for China

Export-related materials and capital goods industries may lose

Health care, telecom, and environmental (“green”) sectors gain.

Also gains for “mass luxury” segment, transportation, and financial services (asset management and insurance) from rising wages, urbanization, and income redistribution.

Geographic and Sectoral Impact

***Losers:* Global China-commodity complex, especially commodity producers in LATAM (Brazil, Chile, and Peru) and Australia.**

***Gains for:* Asian intermediate and final consumption goods producers (high tech), producers in Eastern Europe (middle and low tech) and potentially some LATAM (e.g. Mexico) manufacturers.**

***Asia gains the most:* production relocation, tourism, hospitality, and transportation (especially from rising intra-regional trade).**

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

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