GLOBAL FINANCIAL CYCLE AND ITS IMPLICATIONS ON MONETARY POLICY

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Certificate

This is to certify that the thesis titled "Global Financial Cycle and its Implications on Monetary Policy", being submitted by Ms. Vrinda Gupta to the Indian Institute of Technology Delhi for the award of the degree of Doctor of Philosophy is a record of bonafide research work carried out by her. She has worked under my guidance and supervision and has fulfilled all the requirements for the submission of the thesis, which has attained the standard required for a Ph.D. degree of this institute. The results presented in this thesis have not been submitted in part or full to any other university or institution for any degree or diploma.

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Vrinda Gupta

Abstract

The ongoing synchronized interest rate hike between advanced economies (AEs) and emerging market economies (EMEs) amidst an ensuing global financial slowdown, has once again highlighted that despite financial interventions implemented in the aftermath of 2008-09 crisis, the world economies especially small open countries remain highly exposed to global financial shocks. To design policies that can combat impact of external financial shocks and enhance resilience of domestic financial systems, it is important for policymakers to understand different pathways through which financial shocks are transmitted into domestic countries. An important channel, highlighted in the recent literature is the "global financial cycle" (Rey, 2013) driven by the US monetary policy. Though the literature discusses one common global financial cycle, none of the studies discuss cross-country financial cycles which might exist between individual countries. We find that there exist cross-country financial cycles, which unlike the global financial cycle that responds to US monetary policy shocks, is determined by the macro-financial linkages between the individual countries sharing cross-country financial cycles. Further, we find that the response of these cross-country financial cycles unlike the global financial cycle is less pronounced to the US monetary policy shocks. We further discuss the role of global financial cycle in causing monetary policy impairment in global economies. We find that different forms of global financial cycles have different implications for monetary policy. For equity, both inflows and outflows cycles have significant impact on monetary policy, however, for bond, only outflows cycle have a significant impact. This might be due to increase in importance of equity over bond flows over the years. In order to mitigate the impact of global financial cycle on monetary policy, macroprudential policy can be employed. This thesis discusses in detail of what all macroprudential policy instruments are effective in reducing monetary policy impairment. Lastly, we discuss implications of global financial cycle on economic cycles and other macroeconomic indicators for an EME such as India. We find that the "risk taking channel" is prominent in Indian case wherein the global financial cycle infiltrates the domestic financial cycle. However, the impact is asymmetric across different forms of financial cycles. While equity, credit and the leverage cycle impact domestic counterparts, the global housing cycle does not have any significant impact.

सार

आगामी वैश्विक वित्तीय मंदी के बीच उन्नत अर्थव्यवस्थाओं (एई) और उभरती बाजार अर्थव्यवस्थाओं (ईएमई) के बीच चल रही समकालिक ब्याज दर वृद्धि ने एक बार फिर उजागर किया है कि 2008-09 के संकट के बाद लागू वित्तीय हस्तक्षेपों के बावजूद, विश्व अर्थव्यवस्थाएं विशेष रूप से छोटे खुले देश वैश्विक वित्तीय झटकों से अत्यधिक प्रभावित रहते हैं। ऐसी नीतियों को डिजाइन करने के लिए जो बाहरी वित्तीय झटकों के प्रभाव का मुकाबला कर सकें और घरेलू वित्तीय प्रणालियों के लचीलेपन को बढ़ा सकें, नीति निर्माताओं के लिए यह महत्वपूर्ण है कि वे उन विभिन्न रास्तों की अपनी समझ को पुनर्जीवित करें जिनके माध्यम से वित्तीय झटके घरेलू देशों में प्रेषित किए जाते हैं। हाल के साहित्य में हाइलाइट किया गया एक महत्वपूर्ण चैनल "वैश्विक वित्तीय चक्र" (रे, 2013) अमेरिकी मौद्रिक नीति द्वारा संचालित है। हालांकि साहित्य एक सामान्य वैश्विक वित्तीय चक्र पर चर्चा करता है, कोई भी अध्ययन क्रॉस-कंट्री वित्तीय चक्रों पर चर्चा नहीं करता है जो अलग-अलग देशों के बीच मौजूद हो सकते हैं। हम पाते हैं कि क्रॉस-कंट्री चक्र मौजूद हैं, जो वैश्विक वित्तीय चक्र के विपरीत है, जो अमेरिकी मौद्रिक नीति के झटकों का जवाब देता है, क्रॉस-कंट्री चक्र साझा करने वाले अलग-अलग देशों के बीच मैक्रो-वित्तीय संबंधों द्वारा निर्धारित किया जाता है। इसके अलावा, हम पाते हैं कि वैश्विक वित्तीय चक्र के विपरीत क्रॉस-कंट्री साइकिल की प्रतिक्रिया अमेरिकी मौद्रिक नीति के लिए कम स्पष्ट है। इसके अलावा, हम वैश्विक अर्थव्यवस्थाओं में मौद्रिक नीति हानि के कारण वैश्विक वित्तीय चक्र की भूमिका पर चर्चा करते हैं। हम पाते हैं कि वैश्विक वित्तीय चक्रों के विभिन्न रूपों का मौद्रिक नीति के लिए अलग-अलग निहितार्थ हैं। जबकि इक्विटी अंतर्वाह और बहिर्वाह चक्र दोनों का मौद्रिक नीति पर महत्वपूर्ण प्रभाव पड़ता है, केवल बांड बहिर्वाह का महत्वपूर्ण प्रभाव पड़ता है। यह पिछले कुछ वर्षों में बॉन्ड प्रवाह पर इक्विटी के महत्व में वृद्धि के कारण हो सकता है। हम आगे पाते हैं कि मौद्रिक नीति पर वैश्विक वित्तीय चक्र के प्रभाव को कम करने के लिए समष्टि विवेकपूर्ण नीति का उपयोग किया जा सकता है। थीसिस उन नीतियों पर प्रकाश डालती है जो प्रभावी हैं। अंत में, हम भारत जैसे ईएमई के लिए आर्थिक चक्रों और अन्य व्यापक आर्थिक संकेतकों पर वैश्विक वित्तीय चक्र के निहितार्थ पाते हैं। हम पाते हैं कि "जोखिम लेने वाला चैनल" भारतीय मामले में प्रमुख है जिसमें वैश्विक वित्तीय चक्र घरेलू वित्तीय चक्र में घुसपैठ करता है। हालांकि, प्रभाव वित्तीय चक्रों के विभिन्न रूपों में असममित है। जबकि इक्विटी, क्रेडिट और कुछ हद तक उत्तोलन चक्र घरेलू समकक्षों को प्रभावित करता है, वैश्विक आवास चक्र का कोई महत्वपूर्ण प्रभाव नहीं होता है।

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Abbreviations

ADF	Augmented Dickey Fuller
AE	Advanced Economy
AEs	Advanced Economies
AIC	Akaike Information Criteria
AR	Autoregressive
ARIMA	Autoregressive Integrated Moving Average
ATE	Average Treatment Effect
ATEs	Average Treatment Effects
BO	Bond Outflows
CCB	Countercyclical Capital Buffer
CNX	CRISIL National Stock Exchange Indices
CPI	Consumer Price Index
DID	Difference-in-Difference
DSTI	Debt Service to Income
EFFR	Effective Federal Funds rate
EI	Equity Inflows
EM	Expectation Maximization
EME	Emerging Market Economy
EMEs	Emerging Market Economies
EO	Equity Outflows
FDI	Foreign Direct Investment
FSB	Financial Stability Board
FX	Foreign Exchange

GDP	Gross Domestic Product
GFCy	Global Financial Cycle
GMM	General Method of Moments
HAC	Heteroskedasticity and autocorrelation consistent
Hansen J	James Hansen
HP	Hodrick and Prescott
IC	Information Criteria
IFS	International Financial Statistics
IMF	International Monetary Fund
iMaPP	Integrated Macroprudential Policy
LCG	Limits on Credit Growth
LFX	Limits on Foreign Exposure
LLP	Loan Loss Provisioning
LoanR	Loan Restriction
LSDV	Least Square Dummy Variable
LTD	Loan to Deposit
LTV	Loan to Value
LVR	Leverage ratio
MOSPI	Ministry of Statistics and Programme Implementation
MP	Monetary Policy
MPI	Macroprudential Policy Index

MPP	Macroprudential Policy
MPPs	Macroprudential Policies
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
p	Probability value
Prob	Probability
PP	Phillips Perron
RBI	Reserve Bank of India
REER	Real Effective Exchange rate
RR	Reserve ratio
SA	South Africa
SK	South Korea
SIFI	Systemically important Financial Institutions
S&P	Standard and Poor
SVAR	Structural Vector Autoregressive
t	Test
UK	United Kingdom
US	United States
VIX	Chicago Board Options Exchange' Volatility Index