A Market Player’s View of the Implications of Current Global Financial Turmoil

Caio Koch-Weser, Gustavo Canonero, Arend Kapteyn and Michael Spencer

Deutsche Bank Securities Inc.

All prices are those current at the end of the previous trading session unless otherwise indicated.
Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors.
Data is sourced from Deutsche Bank and subject companies.
Deutsche Bank does and seeks to do business with companies covered in its research reports.
Thus, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Independent, third-party research (IR) on certain companies covered by DBSI’s research is available to customers of DBSI in the United States at no cost.
Customers can access this IR at http://gm.db.com, or call 1-877-208-6300 to request that a copy of the IR be sent to them.

DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1

2008 Global Meeting
Authors:

Caio Koch-Weser
Vice Chairman
Deutsche Bank

Gustavo Canonero
Chief Economist, Latin America
( ) 212 250-7530
gustavo.canonero@db.com

Arend Kapteyn
Chief Economist, EMEA
(+44) 20 754-71930
arend.kapteyn@db.com

Michael Spencer, Ph.D
Chief Economist, Asia
(++852 ) 22038303
michael.spencer@db.com
Subprime is a G3 crisis, not an EM crisis

The “sub-prime crisis” is, in its immediate balance sheet impact, essentially irrelevant to emerging market economies. Of the USD391bn of writeoffs and credit losses reported by banks around the world over the past year, none has been reported by banks in emerging European or Latin American economies and only USD3.1bn has been attributed to banks in emerging Asia.

![Fig 1: Bank write-offs and capital raised since 2007Q1](image)

Sources: Bloomberg and Deutsche Bank
Note: “Asia” includes Japan, Australia and emerging Asia

The “sub-prime crisis” has long since moved beyond sub-prime mortgages, of course. Contagion rapidly spread to other credit products. This was in part because of the opacity of asset-backed securities holdings — the losses on mortgages were unknown both in size and incidence across the investment community. Structured credit products themselves, regardless of the quality of the underlying credit, became less desirable precisely because of their complexity.

And astonishingly, to most observers, it quickly emerged that supposedly low-risk money market funds had invested to a much greater extent than was previously believed in sub-prime mortgages and other asset-backed securities. So the loss of confidence in securitized credit resulted in losses on supposedly “safe” investments — transmitting the “sub-prime” crisis throughout the industrialized economies.

Securitization was still an infant industry in emerging market economies in 2007, though, and so even as prices for structured credit products declined, losses among emerging market investors were limited simply because comparatively little of these products was owned outside the G3 economies.

Moreover, the liquidity crisis that struck US and European banking systems last summer has also largely escaped emerging market banking systems. While uncertainty surrounded the capital positions of some money center banks in the US and Europe, this has rarely been a problem in emerging market banking systems. And with most major emerging market economies continuing to enjoy external surpluses, for most central banks the management of surplus liquidity has remained a more common concern.

However, as investors took losses on structured credit and credit derivatives, their appetite to take on new credit exposures declined. Moreover, as banks’ ability to distribute credit risk suffered, their willingness to originate new loans or underwrite bonds declined. Unlike the immediate balance sheet impact of the crisis, this deterioration in market conditions has impacted emerging markets issues significantly.

![Fig 2: CDX spreads](image)

Spreads on emerging market credit default swaps have widened by about 110bps over the past year, although they are already well down from their peak in late March of this year. Still, it is impressive that emerging markets have outperformed US high-yield and cross-over credits during this period. Spreads on investment grade credit have widened by about 80bps over the past year.

The resilience of emerging markets compared with in many cases comparably rated US issuers is in stark contrast with the experience during previous global crises when investors tended to dump emerging market exposures and retreat to the “safety” of G3 markets. This newfound support for emerging markets reflects both the insignificant direct exposure to structured credit markets and the more resilient economic fundamentals in emerging markets.

Indeed, when we examine international capital flows, we can see how foreign investors have continued to invest in emerging markets debt, although not enough to prevent a modest widening of spreads. While assets have flowed out of high-yield bond funds, there have been small flows into emerging markets bond funds since the subprime crisis broke out.
To a great extent—as we’ll argue more fully below—this reflects the status of many emerging market economies as net commodity exporters. While overall emerging markets equities have seen marginal net inflows over the past year, the breakdown of these flows by regions shows how strongly investors prefer Latin American equities to EMEA or Asian equities—most likely because of the commodities base of large Latin American economies.

However, notwithstanding the positive net flows into emerging markets bond funds, there has been a sharp decline in new issuance of bonds by emerging markets issuers. Through the first four months of this year, bond issuance from emerging markets was down by about half. Syndicated loan volumes were down only a little from last year as corporates have continued to borrow (albeit at wider spreads).

Emerging market banks have borne the brunt of the decline in lending, as combined bond issuance and syndicated borrowing has fallen by 64% from last year’s levels. While Latin American banks have been largely unaffected, the decline in issuance by Asian and European/Middle Eastern banks has been dramatic. This is especially worrying in the EMEA economies because banking systems remain disproportionately dependent upon foreign financing: 25% of total funding for banks in EMEA comes from external sources versus 6% for Asian banks and 7.5% for Latin American banks.

So, while the direct impact of the credit crisis on emerging market banks—and therefore on their economies—has been minor, the indirect impact through a withdrawal of credit and an increase in credit spreads has been more significant, especially in the EMEA region.

As we argue below, while the financial fundamentals of emerging market economies are much stronger than they were in 2001 even, and certainly during previous global crises, the fact that commodity prices have continued to rise even as investors fully expected a recession in the US and much weaker European growth—itself a remarkable phenomenon—has been an important source of support to emerging financial markets. We expect that slower G3 growth will eventually bring commodity prices down. Without that support, prospects for emerging markets’ growth will suffer, while liquidity will dry up as growth in merchandise and commodity export values slows. This is an environment in which we would expect broad-based declines in capital flows to emerging markets.

Commodities soften the blow in Latam

The other important development over the past year—and economists and investors debate the relationship between the two—is the surge in commodity prices. Whether or not commodity prices are rising as a consequence of liquidity injections by the Fed and resulting weakness in the USD, the simple fact is that more than half of the emerging market economies—and some of the largest among these—are net commodity exporters and therefore benefit from improved terms of trade and external balances.
The benefits of commodity price increases are, however, like the costs of a decline in international capital flows, unevenly distributed regionally. Most Latin American economies are net commodity exporters, whereas only four Asian economies (including Vietnam, which is not shown) and four EMEA economies are beneficiaries of rising commodity prices.

Hence, especially in Latin America, an improving terms of trade has supported incomes and therefore domestic demand in many emerging markets. However, this is of little comfort to most EMEA economies that are both commodity importers and experiencing a significant decline in external credit. For Asian emerging markets so far, deteriorating terms have trade have resulted in a decline in external trade surpluses and some weakness in currencies, but this has not yet created significant liquidity shortages.

Exports will transmit the crisis to EM

While the immediate impact of the crisis on emerging market balance sheets has apparently been very small, and to some extent cushioned in Latin America and few other economies by rising commodity prices, we think the crisis will eventually be transmitted to emerging markets through a decline in export growth.

While Asian economies capture the headlines in terms of their openness to international trade -- China and India have doubled the share of trade in GDP and the other Asian economies have an average export/GDP ratio of 115% -- Latin American and EMEA economies have become significantly more open to international trade in recent years as well.

The geographic distribution of exports from these three regions are as one might expect. While the G3 economies command similar shares of Asian and EMEA exports, Europe is much more important than the US in the EMEA while the US and Europe have similar weights in Asian exports.

Latin American economies are more exposed to the US directly than either of the other two EM regions, but are less reliant on exports as a driver of growth in any event.

But what are we to make of the large share of “other” exports. We would caution against assuming this helps insulate economies from the US and EU. The issue is most pressing in Asia, where the “other” is mainly intra-regional exports that account for 38% of total exports.
i.e., more than exports to the US and Europe. However, intra-regional trade in Asia is dominated by trade in intermediate goods, inputs into production of goods that are more often than not exported out of the region. As a result, intra-regional exports are so highly correlated with exports to the G3 (a correlation coefficient of 0.94 since 2000) that they should probably be considered as reflecting G3 demand more than Asian demand. Hence, the G3 directly and indirectly “explain” about two-thirds of Asian export growth. So Figure 7 significantly underestimates the vulnerability of Asia to the G3 economies, in our view.

Fig 8: Asian exports by destination

![Graph showing Asian exports by destination](image)

Sources: CEIC and Deutsche Bank

Outsourcing of production from G3 to emerging market economies over the last 10-20 years and the increasing fragmentation of production networks within emerging markets, particularly in Asia, has meant that emerging market economies have become more exposed to fluctuations in G3 demand over time. But an increasingly export-oriented development strategy within emerging markets has resulted in greatly improved external finances — less debt and higher foreign exchange reserves. So while emerging market capital markets have withstood the first round of the sub-prime crisis very well, they are unlikely to escape the broader economic repercussions of slowing aggregate demand growth in the US and Europe as housing markets continue to correct and labour markets soften.

That said, we have been surprised at the resilience of G3 demand. Contrary to widespread expectations of recession, the US economy expanded at a faster rate in Q1 than it did in 2007Q4. The same was true for Europe and Japan as well, with the result that measured on a year-on-year basis, growth in the G3 was unchanged between Q4 and Q1. Import volumes grew more slowly in the US, but more quickly in Europe and Japan.

Fig 9: G3 import volumes

![Graph showing G3 import volumes](image)

Source: Deutsche Bank

With G3 growth essentially stable in Q1, emerging markets exports slowed only very little — many Asian economies saw export growth rise in Q1 — and therefore external support for GDP growth in the emerging markets remained quite strong.

We do not expect this relatively benign G3 environment will continue. Even though we don’t expect a recession in the US — monetary and fiscal easing appears to have prevented that, at least in 2008 — we see growth in the G3 economies slowing from about 2.0%yoy in Q1 to about 1% in Q4, with growth noticeably weaker in the US than in Europe.

We therefore expect growth in the emerging market economies to slow down gradually, but significantly through 2008. We think the Asian and Latin American economies are particularly exposed to the US slowdown, and while EMEA may benefit on a relative basis from its proximity to a slightly stronger European economy in 2008, the tables may be turned in 2009 if we see an earlier recovery in the US than in Europe.

But we would caution that we do not expect G3 growth overall to be much stronger in 2009 than in 2008 (1.7% in 2009 versus 1.2% in 2008) so our expectation is of a very gradual recovery in growth in the emerging markets as well.
We think it is important to understand that the surprising resilience of growth in many emerging markets is not a result of stronger domestic demand as much as it is a result of surprising strength in exports to the G3. We note, for example, that as economies become more open “domestic demand” becomes more sensitive to exports – exporters are often large employers, paying relatively higher wages and accounting for a disproportionate share of investment. For the most open Asian economies, for example, as shown in Figure 9, investment growth tends to rise and fall with export growth – the exceptional period reflects the decision in Indonesia to double the price of fuel in late 2005.

Credit growth is less export-driven than investment, although clearly a recession in the export sectors in some economies would so significantly impact incomes that consumption would eventually suffer. What seems more important, though, is the availability of credit. Interestingly, in recent years credit growth has not been a significant factor behind consumption in Asia – banks have only recently begun to expand their loan books in some economies. But in Latin America and EMEA credit growth is a significant factor behind consumption. In this respect, the tightening of international credit to EMEA banks, given their heavy reliance on international capital to fund their domestic lending, is a significant negative for the outlook for consumption growth in that region.

Inflation returns, for how long?

Inflation is widely viewed as the most important threat to emerging market economies. We’re not sure this is true, but it is clear that in an environment of still reasonably strong growth in which even the G3 economies haven’t opened up significant output gaps, inflation risks remain to the upside.

However, it is still the case that inflation is mainly coming from commodity prices, with relatively little passthrough to core inflation – at least so far. Remarkably, so tight is commodity supply, and so important is demand in emerging market economies perceived to be, that even when consensus opinion was strongly of the view that the US was in recession and the EU was slowing down rapidly commodity prices continued to rise. Oil prices have about doubled in the past year while the IMF’s food price index has risen 38% -- both in USD.

Commodity prices have a more pronounced impact on emerging markets than industrial economies because households spend a higher share of their income on commodities.

Core inflation has generally been much more subdued, although it has risen along with the higher headline inflation. This is not altogether surprising since, as we observed above, growth hasn’t slowed down...
enough to open up large output gaps, which would be needed to rein in core inflation. As a result of the rising inflation, real interest rates have plummeted in emerging markets.

**Fig. 13: Real policy rates in emerging markets**

![Graph showing real policy rates in emerging markets](image)

Sources: Haver and Deutsche Bank

Allowing real interest rates to fall so sharply is appropriate if the shock to headline inflation is thought to be transitory and if growth was expected to slow down sharply. There is, of course, considerable uncertainty surrounding both issues. While we are commodity bulls, we do not think this necessarily translates into a higher rate of inflation in the near-term or medium-term. Commodity prices have been rising for years without noticeable pass-through to core inflation -- operating margins were compressed as a result of firms’ inability to pass on higher input prices to consumers.

But the current episode of commodity price inflation differs from previous ones in that food prices are especially important. And the experience in emerging markets has been that there is a higher rate of pass-through of food prices to core inflation than there is for energy prices.

We therefore see the likelihood that inflation rates will continue to rise for another quarter or two. Recent abrupt increases in fuel prices in a number of Asian economies, for example, as subsidies were cut will likely take a few months to filter through the price structure of these economies.

But if the G3 economies slow down as much as we expect — we forecast GDP growth of about 1% yoy in Q4 and an average growth rate of about 1.5% next year — we think commodity prices will stabilize and core inflation will tend to decline as wage costs weaken and property prices continue to decline.

For the emerging market economies, lower G3 inflation, slower growth — due to links to the G3 economies — and higher inflation this year that is eroding purchasing power will deliver lower inflation in 2009, in our view. While in the near-term we see many central banks raising interest rates in response to higher-than-expected inflation and rising inflation expectations, we think it possible that in 2009 some central banks may find themselves cutting interest rates.
Appendix 1

Important Disclosures
Additional information available upon request

For disclosures pertaining to recommendations or estimates made on a security mentioned in this report, please see the most recently published company report or visit our global disclosure look-up page on our website at http://gm.db.com.

Analyst Certification
The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s). In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. Michael Spencer
Regulatory Disclosures

SOLAR Disclosure

For select companies, Deutsche Bank equity research analysts may identify shorter-term trade opportunities that are consistent or inconsistent with Deutsche Bank’s existing longer term ratings. This information is made available only to Deutsche Bank clients, who may access it through the SOLAR stock list, which can be found at http://gm.db.com

Disclosures required by United States laws and regulations

See company-specific disclosures above for any of the following disclosures required for covered companies referred to in this report: acting as a financial advisor, manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/comanaged public offerings in prior periods; directorships; market making and/or specialist role.

The following are additional required disclosures:

Ownership and Material Conflicts of Interest: DBSI prohibits its analysts, persons reporting to analysts and members of their households from owning securities of any company in the analyst’s area of coverage.

Analyst compensation: Analysts are paid in part based on the profitability of DBSI, which includes investment banking revenues.

Analyst as Officer or Director: DBSI policy prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director, advisory board member or employee of any company in the analyst’s area of coverage.

Disclosure #5 includes an associate of the research analyst. Disclosure #6, satisfies the disclosure of financial interests for purposes of paragraph 16.5(d) of the Code. The 1% or more interests is calculated as of the previous month end. Disclosure #7 and #8 combined satisfy the SFC requirement under paragraph 16.5(d) of the Code to disclose an in

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, in addition to those already made pursuant to United States laws and regulations.

Analyst compensation: Analysts are paid in part based on the profitability of Deutsche Bank AG and its affiliates, which includes investment banking revenues.

Australia: This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

EU: A general description of how Deutsche Bank AG identifies and manages conflicts of interest in Europe is contained in our public facing policy for managing conflicts of interest in connection with investment research.

Germany: See company-specific disclosures above for holdings of five percent or more of the share capital. In order to prevent or deal with conflicts of interests Deutsche Bank AG has implemented the necessary organisational procedures to comply with legal requirements and regulatory decrees. Adherence to these procedures is monitored by the Compliance-Department.

Hong Kong: See http://gm.db.com for company-specific disclosures required under Hong Kong regulations in connection with this research report. Disclosure #5 includes an associate of the research analyst. Disclosure #6, satisfies the disclosure of financial interests for the purposes of paragraph 16.5(a) of the SFC’s Code of Conduct (the “Code”). The 1% or more interests is calculated as of the previous month end. Disclosures #7 and #8 combined satisfy the SFC requirement under paragraph 16.5(d) of the Code to disclose an investment banking relationship.

Japan: See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Russia: The information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a licence in the Russian Federation.

South Africa: Publisher: Deutsche Securities (Pty) Ltd, 3 Exchange Square, 87 Maude Street, Sandton, 2196, South Africa. Author: As referred to on the front cover. All rights reserved. When quoting, please cite Deutsche Securities Research as the source.

Turkey: The information, interpretation and advice submitted herein are not in the context of an investment consultancy service. Investment consultancy services are provided by brokerage firms, portfolio management companies and banks that are not authorized to accept deposits through an investment consultancy agreement to be entered into such corporations and their clients. The interpretation and advice herein are submitted on the basis of personal opinion of the relevant interpreters and consultants. Such opinion may not fit your financial situation and your profit/risk preferences. Accordingly, investment decisions solely based on the information herein may not result in expected outcomes.

United Kingdom: Persons who would be categorized as private customers in the United Kingdom, as such term is defined in the rules of the Financial Services Authority, should read this research in conjunction with prior Deutsche Bank AG research on the companies which are the subject of this research.
Subscribers to research via email receive their electronic publication on average 1-2 working days earlier than the printed version.

If you would like to receive this or any other product via email please contact your usual Deutsche Bank representative.

Publication Address:
Deutsche Bank AG
Level 55
Cheung Kong Center2 Queens Road Central
Hong Kong
(852) 2203 8888

Internet:
http://gmr.dib.com
Ask your usual contact for a username and password.

Global Disclaimer

This information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively “Deutsche Bank”) for its clients. The information herein is believed by Deutsche Bank to be reliable and has been obtained from public sources believed to be reliable. With the exception of information about Deutsche Bank, Deutsche Bank makes no representation as to the accuracy or completeness of such information. This published research report may be considered by Deutsche Bank when Deutsche Bank is deciding to buy or sell proprietary positions in the securities mentioned in this report.

For select companies, Deutsche Bank equity research analysts may identify shorter-term opportunities that are consistent or inconsistent with Deutsche Bank’s existing, longer-term Buy or Sell recommendations. This information is made available on the SRAF stock list, which can be found at http://gmr.dib.com.

Deutsche Bank may trade for its own account as a result of the short term trading suggestions of analysts and may also engage in securities transactions in a manner inconsistent with this research report and with respect to securities covered by this report, will sell and buy from customers on a principal basis. Disclosure of conflicts of interest, if any, are disclosed at the end of the text of this report or on the Deutsche Bank website at http://gmr.dib.com.

Opinions, estimates and projections in this report constitute the current judgement of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a reader thereof in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate, except if research on the subject company is withdrawn. Prices and availability of financial instruments also are subject to change without notice. This report is provided for informational purposes only. It is not to be construed as an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy in any jurisdiction or an advertisement of any financial instruments.

The financial instruments discussed in this report may not be available to all investors and investors must make their own investment decisions using their own independent advice as they believe necessary and based upon their own financial situations and investment objectives. If a financial instrument is denominated in a currency other than an investor’s currency, a change in exchange rates may adversely affect the price or value of, or the income derived from, the financial instrument, and such investor effectively assumes currency risk. In addition, income from an investment may fluctuate and the price or value of financial instruments described in this report, either directly or indirectly, may rise or fall. Furthermore, past performance is not necessarily indicative of future results.

Derivative transactions involve numerous risks including, among others, market, counterparty default and illiquidity risk. The appropriateness or otherwise of these products for use by investors is dependent on the investors’ own circumstances including their tax position, their regulatory environment and the values of their other assets and liabilities and as such investors should take expert legal and financial advice before entering into any transaction similar to or inspired by the contents of this publication. Trading in options involves risk and is not suitable for all investors. Prior to buying or selling an option investors must review the “Characteristics and Risks of Standardized Options,” at http://www.optionsclearing.com/publications/risk/riskchap1.jsp. If you are unable to access the website please contact Deutsche Bank AG at +1 (212) 250 7994, for a copy of this important document. Furthermore, past performance is not necessarily indicative of future results. Please note that multi-leg options strategies will incur multiple commissions.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor’s home jurisdiction. In the U.S. this report is approved and/or distributed by Deutsche Bank Securities Inc., a member of the NYSE, the NASD, NFA and SIPC. In Germany this report is approved and/or communicated by Deutsche Bank AG Frankfurt authorized by Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). This report is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Kenya by Deutsche Securities Kenya Co. and in Singapore by Deutsche Bank AG, Singapore Branch. In Japan this report is approved and/or distributed by Deutsche Securities Inc. The information contained in this report does not constitute the provision of investment advice. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product. Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/062861/10). Additional information relative to securities, other financial products or issues discussed in this report is available upon request. This report may not be reproduced, distributed or published by any person for any purpose without Deutsche Bank’s prior written consent. Please cite source when quoting.
The Emerging Markets Forum is a not-for-profit initiative that brings together high level government and corporate leaders from around the world for dialogue on the key economic, financial and social issues facing emerging market countries – a dialogue that concludes with consensus and commitment to actionable outcomes.

The Forum is focused on some 50 emerging markets economies in Asia, Europe, Latin America, Middle East and Africa that share prospects of superior economic performance, already have or seek to create a conducive business environment and are of near term interest to private investors, both domestic and international.

The dialogue at the EMF Global and Regional Meetings is based on a Series of papers written by world-renowned authorities exclusively for these meetings.

For more information about the Emerging Markets Forum, please visit our website:

http://www.emergingmarketsforum.org
or email us at
info@emergingmarketsforum.org