US ECONOMIC SLOWDOWN: WHAT IMPLICATIONS FOR THE WORLD ECONOMY?

We have constructed a model to evaluate the consequences of a decline in US domestic demand on different regions via trade volumes. It shows that Nafta members Canada and Mexico would be hit hardest, followed by the developing countries of Latin America and Asia. Europe is somewhat sheltered from this channel, although it would be hit via other channels: foreign exchange, direct foreign investment and the financial market crisis.

How is the American economic crisis transmitted via international trade?

We built a model[1] to study the impact of an ex-ante shock on American demand based on trade flows between the main countries and regions and an elasticity effect. First, we evaluated the direct impact of a US slowdown:

- Changes in US imports are calculated for a given shock on US domestic demand based a main scenario and the elasticity of imports to GDP.
- The contraction in US imports automatically results in a decline in exports by trading partners, pro-rata to the weighting of the United States in their exports.
- This contraction is then looked at in terms of the weight of exports in the GDP of each region, which allows us to estimate the *direct* impact of a US slowdown on different regions.
- This direct ex-ante impact results in an ex-post decline in domestic demand evaluated according to the traditional Keynesian multiplier.

Our model offers the advantage of looking beyond this initial direct impact. It also takes into account the cascading aftershocks induced by the initial shock: the ensuing decrease in domestic demand in the countries that were initially hit triggers a decline in their imports as well. This in turn affects foreign demand, exports and in the end, GDP in each region via the same mechanisms as for the direct impact.

These second-round effects act as a sounding board for the direct impact, and they can be relatively strong for countries with little direct trade with the United States.

US foreign trade

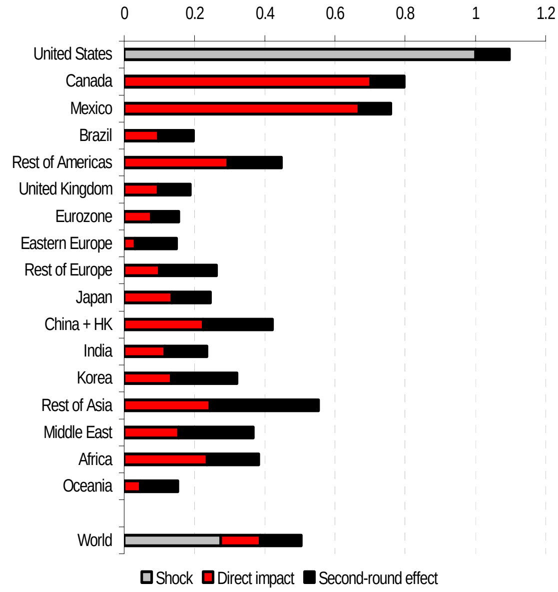
2006 data	Exports to the United States: As % of exports*	Exports to the United States: As % of GDP	Country weighting as share of US exports
Canada	82%	30%	22%
Mexico	86%	27%	13%
Brazil	18%	3%	2%
Rest of Americas	33%	11%	7%
United Kingdom	14%	4%	4%
Eurozone	15%	2%	15%
Eastern Europe	3%	1%	2%
Rest of Europe	8%	4%	2%
Japan	23%	4%	6%
China + HK	20%	10%	7%
India	17%	4%	1%
Korea	13%	6%	3%
Rest of Asia	15%	11%	8%
Middle East	12%	7%	4%
Africa	25%	10%	1%
Oceania	7%	2%	2%

**: Including intra-regional trade, except with the Eurozone. Sources: IMF, SG calculations*

The direct impact is strongest on Nafta...

The impact of a shock on US demand on other countries is linked to the intensity of direct and indirect trade relations (via trade with third countries) with the United States, as well as the value of the parameters used (elasticity, multipliers). Of course, the countries hit hardest are Canada and Mexico, with the transmission of 70% to 80% of the shock (in points of GDP) affecting the United States (these effects must be interpreted in terms of the deviation from the central scenario). The direct impact on the countries of South America is also very strong, albeit to a more limited extent.

Impact on GDP of a 1% shock on US GDP



The impacts indicated above correspond to an ex-ante shock of 1 point of GDP affecting the United States. Based on our central scenario (1.3% growth in 2008), the deviation from US long-term growth potential will probably be closer to 1.5 points of GDP this year.

...whereas second-round effects tend to be stronger in the developing countries and in Europe

In addition to the immediate neighbours of the United States, it is the emerging markets that tend to suffer most (notably the newly industrialised countries of Asia). Since a US slowdown implies sluggish world trade, the countries whose economies rely heavily on exports are the first victims of second-round effects, which can be as strong as direct effects.

Inversely, since Europe is relatively closed, the effects are much more limited. The ensuing slowdown in world trade, though milder, would have a bigger impact than that solely of bilateral trade between Europe and the United States. Although this is clear for the Eurozone, it is even more so for Eastern Europe, where trade is mainly directed towards western European neighbours.

Yet other transmission channels also come into play: foreign exchange, direct foreign investment and the financial crisis

This is a simple model: it does not take into account the structure of trade by product. For example, countries exporting primarily consumer goods and automobiles would be hit much harder by a contraction in export volumes than oil exporters.

Moreover the structure of the model does not integrate currency effects: the weak dollar has a particularly strong impact on countries linked to the euro. Revenues linked to the foreign direct investments would also be affected. Lastly the present model looks at international trade as the only transmission channel. Yet the current crisis is also transmitted via the financial markets and the depreciation of assets affecting banks. This is also a channel that is likely to have a significant impact on Europe.

Loïc BRIENT +33 1 42 14 92 73

[1] *For more details, see: "*The transmission of US cyclical developments to the rest of the world*", Dées and Vansteenkiste, ECB Working Paper series n°798, 2007.*