

Weighted Average Relative Price (WARP)
A Supplement to Standard Real Effective Exchange Rates (REERs)

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This paper describes our weighted average relative price (WARP). The staff in the International Finance Division of the Federal Reserve Board has found it to be a useful supplement to the Board's standard real effective exchange rate measures (REERs). The WARP attempts to measure the level of US prices relative to the prices of those countries that either trade directly with the United States or compete against US exporters in third markets. It is computed using purchasing power parity (PPP) measures from the International Comparison Project, market exchange rates, and trade shares. Because it starts from relative price levels, and is not a chained construct (as most REERs are), the WARP is able to capture an important channel through which increased trade with developing economies, especially China, directly affects the measures relevant for modeling trade volumes and import prices. We show why this channel is not well captured in standard REERs and compare the WARP to several standard measures. Finally, the paper discusses how WARP-like measures relate to notions of international competitiveness.

Key Words: Modeling trade volumes, purchasing power parity, China, international competitiveness