

# COMPASS FOR GDP-LINKED BONDS

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*This document summarizes recent considerations with regard to state-contingent debt instruments and focuses more specifically on GDP-linked bonds. Based on the IMF's "Staff Note for the G20: State-Contingent Debt Instruments for Sovereigns" it presents a systematic, yet not exhaustive, overview of important aspects of GDP-linked bonds listing benefits, challenges and their potential mitigating factors, as well as considerations on instrument design. Its objective is to inform interested sovereigns and investors that aim at navigating the territory of GDP-linked bonds.*

## **(1) Why we address the subject of GDP-linked bonds**

At our meeting in Chengdu in July 2016, we called for further analysis of the technicalities, opportunities and challenges of state contingent debt instruments including GDP-linked bonds. Sovereign state-contingent debt instruments are not new. There is already a long history across many countries of the use of inflation-linked bonds. At the same time it is important to ensure the lessons experienced with GDP-linked warrants are fully taken on board. With this document we aim at:

- **Examining solutions that may contribute to fiscal flexibility and debt sustainability.** From a conceptual perspective, well-defined GDP-linked bonds are promising instruments as they may offer additional opportunities of risk-sharing among sovereigns and private investors thus having the potential to contribute to debt sustainability.
- **Unlocking potential by addressing pros and cons.** So far, practical experiences with GDP-linked instruments have been limited. Before potential advantages of GDP-linked bonds can be unlocked we deem it necessary to provide a systematic view on possible benefits and challenges as well as mitigating factors.
- **Formulating an initial reference for interested sovereigns.** This compass aims to add value to the current discourse on GDP-linked bonds by combining conceptual considerations and insights of market participants that may inform and serve as a first reference for interested sovereigns when assessing whether to issue GDP-linked bonds and how to design such instruments. Prospective issuers who want to explore this new market segment may want to rely on these references also with a view to possibly coordinate issuances.

## **(2) Potential benefits to sovereigns and the international financial system**

We view GDP-linked bonds as potentially beneficial instruments when designed in ways which may:

- **Generate policy space in difficult economic times.** GDP-linked bonds can tie a country's debt service to its ability to pay thus reducing public debt service in difficult economic times and generating space for countercyclical policy. Therefore, GDP-linked bonds may not only provide risk-diversification benefits for sovereigns

but also for international investors and strengthen the global financial system when facing economic shocks.

- **Facilitate counter-cyclical policy.** This feature could be particularly useful to sovereigns looking to complement existing macro policy tools.
- **Offer ancillary benefits** such as widening the set of financial instruments, contributing to enhancing the completeness of financial markets.

### **(3) Challenges and mitigating factors**

The use of GDP-linked bonds faces a number of challenges. Whether they can add benefits to issuers and the international financial system will crucially depend on how potential challenges can be mitigated. Specifically, challenges include how GDP-linked bonds adjust to GDP fluctuations, the specification of the state variable, the adjustment mechanism, their price, their investor base, their novelty or liquidity premia during the transition period, their share in public debt of the respective country and design issues as well as the availability of reliable data for measuring GDP development. For these instruments to be effective and economical we believe that, among other things, it would be important to

- **Take steps to reduce costs of insurance.** The costs of insurance will depend on how GDP-linked bonds and their markets are instituted:
  - Benchmarking / standardizing the design of GDP-linked bonds by choosing a straightforward architecture can reduce liquidity, novelty and complexity premia.
  - Including floors in the design of GDP-linked bonds may limit the variance of investor income flows from these instruments and reduce premia. Such floors would need to be designed carefully if the insurance benefits of the instruments are to be sufficiently preserved.
  - Issuance of GDP-linked bonds by several interested sovereigns may benefit market development by overcoming problems of adverse selection, helping deepen markets and reduce new issuance premia.
  - As GDP-linked bonds can contribute to debt sustainability of a country, their benefits could translate into lower risk premia for conventional debt, too.
- **Carefully assess the demand.** Further consultations with debt managers and market participants would be needed; in particular, the potential interest of international investors for this financial tool should be carefully scrutinized.
- **Target international investors.** Diversifying the investor base for GDP-linked bonds would spread the income effect of a country-specific economic shock and could assist with countercyclical demand smoothing.
- **Fulfill statistical, technical and regulatory prerequisites.** Reliable and timely statistics are essential for the functioning of GDP-linked bond-markets. A sound regulatory framework needs to be in place to alleviate potential risks of a migration of budgetary risk into parts of the financial system ill-suited to bear it and will also

address the perception of moral hazard associated with the political difficulty of sharing the upside of growth with investors.

#### **(4) Key choices on the design of GDP-linked bonds**

GDP-linked bonds can be designed in multiple ways to accommodate country-specific circumstances. The design of possible variants requires a careful analysis of the complex technicalities associated with the specific features of each type of bonds.

- **Fixed-income or equity-like products:** GDP-linked bonds can be designed as fixed-income products where coupon payments vary with economic performance, or as equity-like products where principal repayments (possibly in addition to coupon) vary with (cumulative) GDP growth. Issuers may choose either design depending on their preferences, albeit at the cost of less standardization.
- **Choice of state variable:** Some investors and sovereigns may prefer real rather than nominal GDP (when linking to level or cumulative growth). For diversified economies, nominal GDP would be a natural choice of state variable due to the close correlation with their tax bases. For commodity dependent countries, there may be greater benefits from linking to the relevant commodity price, which has the advantage of being readily and more immediately verifiable.
- **Foreign or local currency instruments:** Local currency GDP-linked bonds offer the greatest benefits and may be particularly suitable for well-diversified economies with access already to local currency bond markets. GDP-linked FX-instruments deliver smaller benefits (due to FX risks) but may be more suitable for countries that lack well-developed local currency debt markets, and need particularly to target international investors.
- **Maturity-extending mechanisms:** Other types of GDP-linked bonds are sovereign convertible bonds with fixed principal and coupon payments which include a provision of extending maturity by a specified amount of time, e.g. related to weak GDP development. If appropriately designed, they could be issued with the objective of preventing the flight of investors during crises.