care utilization and charge data, including patient discharge data, with annual data available starting in 1988. The 2010 database contains information on approximately 8 million hospital stays from over one thousand hospitals in forty-five states.

Preliminary results suggest that the “treatment” approach is the most viable because of data limitations with the other two approaches. The research also attempts to “quality-adjust” the treatment-based output measure using data on survival rates by DRG but finds that this adjustment has no real effect on the output measure. The BLS will continue to explore ways that these data may be used to measure hospital output in BLS measures of productivity.

The BLS has been collaborating with the BEA on a set of industry-level production accounts. These accounts incorporate BEA industry measures of gross output and intermediate inputs—including energy, materials, and purchased services—and labor and capital input measures by industry from the BLS. The accounts present contributions of KLEMS inputs and multifactor productivity to gross output growth at roughly the three-digit NAICS level of industry detail based on a gross-output production accounting framework. A joint BEA-BLS working paper describing the prototype accounts is being presented in August 2012 at the Second World KLEMS conference at Harvard. A research spotlight will be published in the BEA’s Survey of Current Business and the final working paper will be posted on both the BEA and BLS websites.

Finally, related to the conference agenda topics of household production, leisure, and living standards, 2012 respondents to the American Time Use Survey currently are being asked a module of questions about well-being. This module, sponsored by the National Institute on Aging, asks respondents to rate how they felt (sad, stressed, happy, tired, in pain) during three activities they engaged in “yesterday” (the core of the ATUS is a time diary about how people spent their time on the day before the interview). A similar module ran in 2010. More information about the ATUS well-being module is available on the BLS website (www.bls.gov).

Adelheid Burgi-Schmelz

To begin with, I would like to thank the organizers of this panel for having invited me. I will start by repeating the Sherlock Holmes/Sir Arthur
Conan Doyle quotation cited by Federal Reserve chairman Ben Bernanke at the opening of this conference: “It is a capital mistake to theorize before one has data.” And, I might add, if data are not readily available, then data gaps need to be filled. Hence, filling data gaps is at the core of my panel remarks.

This conference extensively covered, among other topics, issues focusing on well-being, distribution of income, household production, information for macroprudential policy, integrating real and financial accounts, sustainability, human capital/education, and health. What these topics have in common is that there are lots of data gaps that may prevent “theorizing” comprehensively.

The IMF Statistics Department is spearheading a global effort to plug some data gaps that became critical in the financial crisis. I will now provide you with some information on this work. Please consider this information more as teasers than as in-depth studies, make extensive use of the references provided, and contact me or my colleagues at the IMF if you have follow-up questions.

So where are these data gaps?

I will point to the following two examples:

First, let’s look at the following balance sheet view of data needs and sources, as shown in figure P4.1.

This figure shows how IMF data collections such as Standardized Report Forms (SRFs), International Investment Positions (IIPs), and the Coordinated Portfolio Investment Survey (CPIS) or joint efforts with other international organizations—such as QEDS or JEDH—cover the checkered fields on holders of liabilities versus issuers of liabilities.

Second, we live in an interconnected world! The IMF started to analyze financial interconnections outside the traditional banking systems in 2010. Figure P4.2 shows the idea.

It is important to note that the size of these flows has become almost as large as the size of flows within the traditional banking system, but the flows connect different nodes than the banking system nodes.

These are just two examples. In order to plug the gaps, the G20 and the IMFC mandated the Data Gaps Initiative in early 2009. The initiative is based on twenty recommendations with annual progress reports, as shown in table P4.1.

Among these recommendations is recommendation #16, which covers information on the distribution of household income, a topic that this conference discussed thoroughly.

The Data Gaps Initiative is based on close collaboration of international agencies, as shown in figure P4.3.

The backbone is the Interagency Group on Economic and Financial Statistics (IAG), which is composed of BIS, ECB, Eurostat, IMF (chair), OECD, the UN, and the World Bank. The IAG jointly runs a website with
<table>
<thead>
<tr>
<th>Holder of liability (creditor)</th>
<th>Central bank</th>
<th>General government</th>
<th>Other depository corporations</th>
<th>Other financial corporations</th>
<th>Nonfinancial corporations</th>
<th>Other resident sectors</th>
<th>Nonresidents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central bank</strong></td>
<td></td>
<td></td>
<td>1. SRF 1SR (Liabilities)</td>
<td>1. SRF 1SR (Liabilities)</td>
<td>1. SRF 1SR (Liabilities)</td>
<td>1. SRF 1SR (Liabilities)</td>
<td>1. SRF 1SR (Liabilities)</td>
</tr>
<tr>
<td><strong>General government</strong></td>
<td></td>
<td>1. SRF 2SR (Assets)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>1. IIP</td>
</tr>
<tr>
<td><strong>Other depository corporations</strong></td>
<td>1. SRF 1SR (Assets)</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 2SR (Liabilities)</td>
</tr>
<tr>
<td><strong>Other financial corporations</strong></td>
<td>1. SRF 1SR (Assets)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>n.a.</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
</tr>
<tr>
<td><strong>Nonfinancial corporations</strong></td>
<td>1. SRF 1SR (Assets)</td>
<td>n.a.</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>1. IIP</td>
</tr>
<tr>
<td><strong>Other resident sectors</strong></td>
<td>1. SRF 1SR (Assets)</td>
<td>n.a.</td>
<td>1. SRF 2SR (Liabilities)</td>
<td>1. SRF 4SR (Liabilities)</td>
<td>n.a.</td>
<td>1. IIP 2. CPIS 3. JEDH</td>
<td>1. IIP 2. CPIS</td>
</tr>
<tr>
<td><strong>Nonresidents</strong></td>
<td>1. SRF 1SR (Assets)</td>
<td>1. IIP 2. CPIS 3. CPIS</td>
<td>1. SRF 2SR (Assets)</td>
<td>1. SRF 4SR (Assets)</td>
<td>1. IIP 2. CPIS 3. CPIS</td>
<td>1. IIP 2. CPIS</td>
<td></td>
</tr>
</tbody>
</table>

Fig. P4.1  A balance sheet view of data needs and sources

*Contributor: Mr. Alfredo Leone, International Monetary Fund.

1This data gap can in the future be filled with data from the public debt data template (which also covers assets), which is being piloted in some countries.

2CPIS data can be used to derive other resident sector’s claims as residual.
An interconnected world

The financial links between the United States, the United Kingdom, and Luxembourg are especially strong. (countries with largest number of connections with other countries)

Fig. P4.2 Financial interconnections outside of the traditional banking systems


Notes: An interconnected world: The financial links between the United States, the United Kingdom, and Luxembourg are especially strong. (Countries with largest number of connections with other countries). Thicker lines signify greater exposure among countries.

Principal Global Indicators (www.principalglobalindicators.org/default.aspx).

The website is continuously expanding the data sets covered and upgrading its methodology. In the first days of this month, for example, balance of payments and international investment position data based on BPM6 were published for the first time.

Another result of the collaboration of the IAG are the quarterly G20 growth aggregates, as shown in figure P4.4.

I had better stop here before you are completely overwhelmed by my
<table>
<thead>
<tr>
<th>Table P4.1 Data gaps</th>
<th>Existing conceptual/ statistical frameworks and ongoing collection</th>
<th>Conceptual/statistical framework needs further development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build-up of risk in the financial sector</td>
<td>#2 Financial soundness indicators (FSIs) #5 Credit default swaps #7 Securities</td>
<td>#3 Tail risk in the financial system #4 Aggregate leverage and maturity mismatches #6 Structured products</td>
</tr>
<tr>
<td>Cross-border financial linkages</td>
<td>#10, #11, #12 Coordinated portfolio investment survey, international banking statistics, international investment positions</td>
<td>#8 and #9 Global network connections and systemically important global institutions</td>
</tr>
<tr>
<td>Vulnerability of domestic economies to shocks</td>
<td>#15 Institutional sector accounts #17 Government finance statistics #18 Public sector debt #19 Real estate prices</td>
<td>#13 and #14 Financial and nonfinancial corporations’ cross-border exposures</td>
</tr>
<tr>
<td>Improving communication of official statistics</td>
<td>#20 Principal global indicators (PGI)</td>
<td></td>
</tr>
</tbody>
</table>


Notes: The column in the middle refers to statistics that exist already, but that should be improved or expanded. The column on the right-hand side lists items that did not exist at the outset of the financial crisis. Moreover, in order to develop them, a framework needs/needed to be developed first before data collection could start.
Fig. P4.3  Collaboration in the G20/IMFC Data Gaps Initiative

Fig. P4.4  Example: G20 GDP growth aggregates


*Notes:* G20 quarterly GDP in volume terms. Percentage change on the previous quarter, seasonally adjusted data.
enthusiasm. There is plenty of more information to be found on the website of the IMF (www.imf.org/external/data.htm).

I thank you, the audience, for bearing with me, and I am grateful that the staff of the IMF Statistics Department has produced or coproduced all these wonderful results that I highlighted today!