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TECHNICAL ASSISTANCE REPORT

LIECHTENSTEIN

Report on the National Accounts Statistics Mission (June 8–19, 2026)

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Prepared By

Michael Stanger and Thomas Alexander

Authoring Department:

Statistics Department IMF

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Table of Contents

Acronyms and Abbreviations **2**

Summary of Mission Outcomes and Priority Recommendations **3**

Detailed Technical Assessment and Recommendations **5**

A. Introduction and Institutional Framework 5

B. Overview of the National Accounts Compilation System 6

- Annual GDP in Volume Terms 9
- Early Estimates/Quarterly GDP 10

C. Insurance Activities 11

- Overview 11
- Life and Non-Life Insurance Activities 12
- Health Insurance 12
- Pension Funds 13

D. Financial Intermediation Services 14

- Directly Charged Services 14
- FISIM 15

E. Research and Development 16

F. Revision Policy 17

G. Other Meetings Held 18

H. Officials Met During The Mission 21

Appendices **22**

A. Appendix A. Production and Income Accounts 22

Acronyms and Abbreviations

2008 SNA	*System of National Accounts, 2008*
CPI	Consumer Price Index
ESA 2010	European System of National and regional Accounts, 2010
FISIM	Financial Intermediation Services Indirectly Measured
FMA	Financial Market Authority, Liechtenstein
FSO	Federal Statistics Office of Switzerland
GDP	Gross Domestic Product
GNI	Gross National Income
IC	Intermediate Consumption
IMF	International Monetary Fund
IT	Information Technology
LCCI	Liechtenstein Chamber of Commerce and Industry
NA	National Accounts
NACE	Statistical Classification of Economic Activities in the European Community
NOGA	General Classification of Economic Activities/Swiss NACE
OECD	Organization for Economic Co-operation and Development
PPI	Producer Price Index
R&D	Research and Development
SNA	System of National Accounts
SPPI	Services Producer Price Index
SUTs	Supply and Use Tables
VA	Value Added
VAT	Value Added Tax

Summary of Mission Outcomes and Priority Recommendations

1. At the request of the authorities, the IMF conducted an in-person technical assistance mission to Vaduz during June 8–19, 2026. The mission supported the authorities' ongoing efforts to modernize Liechtenstein's national accounts and strengthen their quality, relevance, and alignment with international statistical standards.

2. The mission reviewed Liechtenstein's national accounts compilation framework, with a focus on GDP measurement, the financial sector, the development of volume estimates, and options to improve the timeliness and frequency of GDP dissemination. The review confirmed that the current system is broadly aligned with the principles of the European System of Accounts, 2010 (ESA 2010) and benefits from extensive administrative data coverage but also identified important limitations in source-data detail, conceptual alignment, automation, and timeliness.

3. The mission's main findings relate to the need to strengthen financial-sector estimates, improve the measurement of insurance and pension fund output, address negative FISIM episodes, and prepare a framework for annual GDP in volume terms. The mission recommended adopting conventional insurance-output methods where feasible, requesting more detailed information from the Financial Market Authority (FMA) and other data providers, and further assessing pension fund investment income, banking transactions, and FISIM by currency, maturity, and institutional sector.

4. To support volume measures of GDP, the mission proposed developing a deflator system based on detailed Swiss price statistics, reflecting Liechtenstein's close economic and monetary links with Switzerland and the absence of a domestic price statistics program. The proposed approach would use Switzerland's producer price index (PPI), services PPI (SPPI), and consumer price index (CPI) data, together with comparable production structures, to derive activity-level output and intermediate consumption deflators and support double deflation and chained volume measures.

5. Improving GDP timeliness is a central priority. At present, the first annual GDP estimate is released 15 months after the reference year, with subsequent revisions after 23 and 35 months. The mission recommended exploring quarterly value added tax (VAT) data as a timely source for annual imputations and as the foundation for an experimental quarterly GDP framework. If feasible, this would allow earlier annual estimates to be compiled as the sum of quarters while also addressing the current frequency gap.

6. The mission also identified several medium-term priorities, including refining research and development estimates, implementing revisions back to 2013, and developing an integrated dissemination and revision policy for national accounts. These improvements should be supported by clearer documentation, systematic engagement with data providers, and a more automated compilation environment.

7. Implementation will depend critically on staffing and IT capacity. The national accounts team is transitioning to two new full-time staff members, while an experienced compiler is expected to retire. Given the complexity of the Excel-based compilation system and the need to automate existing and new processes, the mission recommended hiring an additional contractual staff member with IT expertise.

8. As an immediate outcome, annual GDP figures will be revised and new levels for 2023 and 2024 are expected to be published in November 2026. These revisions mainly reflect improved methods for financial activities, excluding financial intermediation, and are expected to raise GDP levels in both years. The IMF will continue to support implementation through monthly meetings, with an interim assessment planned for March 2027 to review progress and determine whether an additional in-person mission is needed.

9. To support progress in the above work areas, the mission recommended a detailed one- year action plan with the following priority recommendations carrying particular weight to make headway in improving national accounts statistics quality:

TABLE 1. Priority Recommendations

Target Date	Priority Recommendation	Responsible Institutions
November **2026**	*Engage the Financial Market Authority (FMA) and other financial-sector data providers to obtain detailed data needed to improve insurance, pension fund, banking, and FISIM estimates.*	• Office of Statistics; FMA
November **2026**	*Implement the improved insurance-output methodology for non-life insurance and Swiss insurers' operations, and refine the treatment of life insurance where feasible.*	• Office of Statistics; FMA
November **2026**	*Obtain and assess quarterly VAT data to support earlier annual GDP estimates and develop an experimental quarterly GDP framework.*	• Office of Statistics; Tax Authority

10. Further details on the priority recommendations and the related actions/milestones can be found in the action plan under Detailed Technical Assessment and Recommendations.

Detailed Technical Assessment and Recommendations

A. Introduction and Institutional Framework

11. A TA mission visited the Office of Statistics in Liechtenstein to provide assistance on assessing GDP measurement, with particular emphasis on the financial sector, the development of volume estimates, and options to improve the timeliness of GDP dissemination. This mission was the continuation of a series of online engagements with the authorities that took place in the months preceding the mission. Overall, the system is broadly aligned with ESA 2010 principles; however, important limitations in source-data detail, conceptual alignment, automation, and timeliness were discussed with the mission counterparts.

12. The institutional context is central to understanding Liechtenstein's macroeconomic statistics. The Office of Statistics Liechtenstein is the national statistical authority and the smallest institution in the European Statistical System. As the sole producer of official statistics in the country, it is responsible for collecting, maintaining, and disseminating official statistics in accordance with the Statistics Act and the principles of the European Statistics Code of Practice. Owing to Liechtenstein's small size, the Office relies primarily on administrative registers rather than sample surveys. This is particularly true for macroeconomic statistics, where both national accounts and government finance statistics are compiled almost exclusively from administrative data. At present, Liechtenstein does not produce external sector statistics.

13. Following Liechtenstein's accession to the IMF, the authorities established a coordination group, chaired by the Office of Statistics, to address these data gaps and strengthen the country's macroeconomic statistical system. The group oversees the development and implementation of the statistical infrastructure required to compile external sector statistics and meet international reporting standards.

14. The coordination group serves as the central body responsible for overseeing and coordinating the development of macroeconomic statistics in Liechtenstein. It brings together the key institutions involved—the Office of Statistics, the Ministry of General Government Affairs and Finance, and the FMA—to ensure a coordinated and consistent approach to the project. It is supported by the Liechtenstein Institute, a local research institute with extensive expertise in macroeconomic data and methodological issues, which participates in the coordination group as advisory members, provides analytical input and contributes to the development of appropriate statistical methods.

15. The primary responsibility of the coordination group is to facilitate effective cooperation among the participating institutions. This includes coordinating activities, promoting the exchange of data and information, clarifying roles and responsibilities, and supporting the preparation and implementation of a coherent project plan. In addition, it helps ensure that the development of macroeconomic statistics is aligned with international statistical standards, particularly in the context of Liechtenstein's membership in the IMF, while at the same time maintaining a proportionate approach that minimizes administrative burden for data providers and public authorities.

16. The IMF discussed the Project Status Report for the modernization of macroeconomic statistics with the Office of Statistics and other members of the Coordination Group on

Macroeconomic Statistics, and provided feedback.[1] The report provides a comprehensive and well- structured roadmap for improving the national accounts, including modernization, enhanced timeliness and accuracy, the development of annual GDP in volume terms and quarterly GDP, balance of payments statistics, price statistics, and related institutional and capacity-building activities. The IMF considers the overall strategy to be sound and broadly consistent with the authorities' objectives and statistical priorities. However, some adjustments to the implementation timeline may be warranted to reflect staffing constraints, data dependencies, and the complexity of several methodological initiatives. The IMF also suggested that some workstreams may need to be reprioritized to ensure that resources remain focused on the highest-priority deliverables, particularly those related to improving the timeliness of GDP estimates and developing annual GDP in volume terms. The authorities are encouraged to continue using the Project Status Report as a tool for monitoring implementation progress, coordinating activities across institutions, and aligning future technical assistance with the statistical development objectives.

17. The mission built on several online discussions held with the compiling team earlier this year and focused on reviewing the financial activity and assessing the feasibility of expanding the scope and improving the timeliness of the national accounts. Future work will include more detailed reviews and assessments of the current procedure and developing new statistical products. The main discussions of the mission with the compiling team, including the agreed recommendations, are described in the following sections.

B. Overview of the National Accounts Compilation System

18. The structure of Liechtenstein's national accounts reflects both ESA/SNA principles and country-specific analytical needs. The national accounts statistics program in Liechtenstein consists of five sets of annual accounts, all in current prices. These include, in terms of the *2008 SNA*/ESA 2010, the Production, Generation of Income, Allocation of Primary Income accounts, along with ad-hoc estimates of the National Income, and Distribution of National Income. The latter two accounts are a distinctive feature of Liechtenstein's national accounts and are based on the former system of accounts. These accounts generate the following macroeconomic aggregates: GDP by the production approach, GDP by the income approach, Gross National Income (GNI), and National Income, a Liechtenstein aggregate used by the Swiss authority for tax purposes.

[1] Project Status Report: Towards a New Era of Macroeconomic Statistics (in Liechtenstein); Office of Statistics Liechtenstein; Draft Version (August 2025)

TABLE 2. Production and Distribution of Income Accounts (ESA 2010)

Table 8.1 — Synoptic presentation of the accounts, balancing items and main aggregates

Accounts										Balancing items		Main aggregates
Full sequence of accounts for institutional sectors												
Current accounts	I.	Production account	I.	Production account						B.1g	Value added, gross	Gross domestic product (GDP)
	II.	Distribution and use of income accounts	II.1	Primary distribution of income accounts	II.1.1	Generation of income account				B.2g B.3g	Operating surplus, gross Mixed income, gross	
					II.1.2	Allocation of primary income account	II.1.2.1	Entrepreneurial income account	B.4g	Entrepreneurial income, gross		
							II.1.2.2	Allocation of other primary income account	B.5g	Balance of primary incomes, gross	Gross national income (GNI)	

19. The accounts are compiled simultaneously by economic activity and by institutional sector. Currently, the compilation system is built at 2-digit level of the NOGA (Swiss NACE) which includes 88 economic activities, and using five institutional sectors: Non-financial, Financial, Government (State), Households, and Private non-profit organizations (the latter two are published as aggregate). The national accounts area also has a detailed document describing the sources and methods used in the compilation.

20. Given the deep integration and economic interdependency of Liechtenstein with the rest of the world, in finance and manufacturing in particular, GNI is a key indicator along with GDP. The administrative system in Liechtenstein is comprehensive with regards to recording the activity that takes place in the country and to the international financial flows relating domestic companies. The classification of financial transactions (and other income flows), therefore, plays a crucial role when it comes to determining whether these are recorded in GDP or GNI. As is explained in the next sections of this report, some Bank in flows are the result of their own funds' investments, as opposed to services provided to customers' funds, so these flows are included in GNI (and excluded from GDP).

21. GDP in Liechtenstein is estimated from the production approach, at current prices, following ESA 2010 methodology. While the Office of Statistics also releases GDP by the income account, these estimates are not derived independently from the production approach, as one component is derived residually (operating surplus/mixed income). By definition, GDP by the production approach is compiled as the aggregation of the value added generated by each productive agent in the domestic economy, plus taxes net of subsidies on products.

GDP = total output − intermediate consumption +

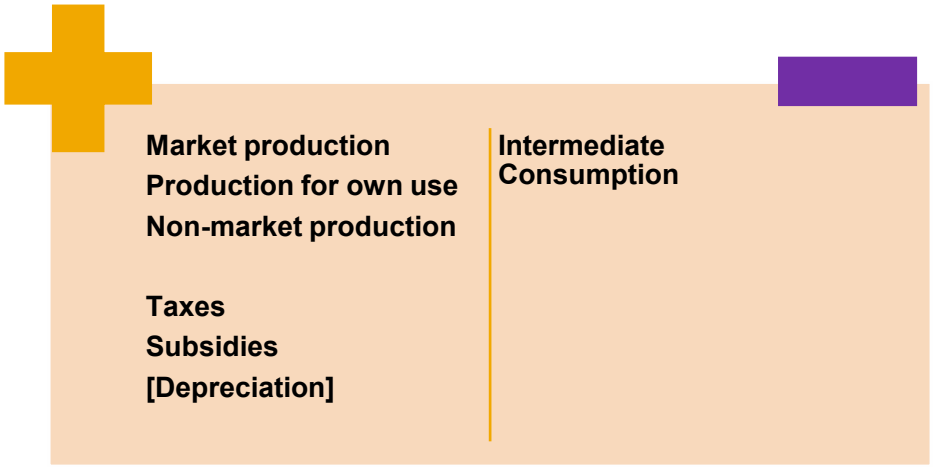
(taxes on products − subsidies on products)

22. The compilation relies on a broad set of administrative sources that provide detailed information for most economic activity. The accounts are based on a variety of data sources, including tax administration's data collection form by company for about 75 percent of the accounts and a range of other administrative sources. The main items extracted from these sources include revenues, expenses, taxes, salaries, employer's social contributions, subsidies, depreciation, interest income and expenses, reinvested earnings resources and uses, and withdrawals.

23. Adjustments and imputations are made when data are not yet available. While the tax law obliges companies to file the return form 6 months after the accounting period (calendar year), a 6-month

extension can be granted upon request, which is widely used by local companies, therefore, the initial estimates include imputations to fill the gaps. Even after a year, there are still some gaps in the data. The imputation methods are based on extrapolation using alternative sources (employment and VAT reports).

24. The current production system creates operational complexity because of its intertwined dependencies among multiple files. The compilation system is heavy, as it relies on many interlinked Excel files. These files build the accounts on an incremental basis according to the data sources available: the initial set of accounts is built for activities based on tax data; agricultural; financial activities, and so on. The final tabs summarize the value added, taxes and subsidies to derive GDP.



25. The small and highly specialized structure of Liechtenstein's economy affects the interpretation of national accounts aggregates. Given Liechtenstein's characteristics as a small, open, and highly specialized economy, economic activity is sensitive to internal and external shocks that can be related to a small set of players. Therefore, the accounts may show higher-than-usual volatility. This is not a statistical problem but an inherent feature that may pose additional challenges to both compilation and analysis of the aggregates. Also, quality assessments may become challenging as the source data are not statistical in nature, which also plays a significant role in revisions as financial reporting get amendments sometimes and tax filing does not follow a unfirm schedule.

26. Liechtenstein does not compile its own consumer or producer price indices. Based on the assumption that its close economic integration with Switzerland—including use of the Swiss franc—makes Swiss price movements broadly representative of domestic conditions. Beside ongoing work on developing a rental and housing price index for Liechtenstein, there are no plans to develop consumer and producer price indices in the country. Therefore, the Swiss CPI, PPI and SPPI are considered as valid proxies by the authorities and for the time being when prices are needed (e.g., for future work relating to deflation), these price indices will be used.

Annual GDP in Volume Terms[2]

27. The international recommendation is to derive volume estimates of value added as a residual of output in volume terms and intermediate consumption in volume terms (double deflation). This procedure requires appropriate price indices for output and intermediate consumption by economic activity. The valuation of both output and intermediate consumption is at basic or producer's prices then, when available, PPI and SPPI should be used and then complemented with CPI. As Liechtenstein has no price index system, the proposal was to use the indices produced by Switzerland.

28. As output and intermediate consumption are built at an industry level, the deflators need to be built using industry structures. However, these industry structures are not available in Liechtenstein. Production structures are generally derived from detailed industrial surveys (or censuses), detailed enterprise reports, or supply and use tables. As an interim solution, the industrial structures could be borrowed from the corresponding activities carried out in Switzerland. While the Federal Statistics Office of Switzerland (FSO) office disseminates supply and use tables (SUT), these are more aggregated than the activities compiled in Liechtenstein. The national accounts team will contact the FSO to check whether a more detailed set of tables can be shared with the Office of Statistics.

29. Each economic activity recorded in the SUT includes the main and secondary production as well as the detailed banquet of intermediate products used in production. These structures are the basis used to derive the weights used to aggregate detailed prices statistics (by product) to arrive at industry specific deflators. The FSO disseminates detailed consumer and producer prices indices on a monthly basis.

30. With this information, monthly industry deflators will be generated for each industry's output and intermediate consumption so that value added can be derived in volume terms. While this is the preferred approach, some industries may need to be estimated using an alternative approach, single indicator method.[3] Taxes and subsidies on products in volume terms follow a specific approach, which implies that these variables evolve as the volume of products that are subject to these taxes and subsidies, as follows:

- The amount of taxes on products, excluding VAT (D.212 and D.214) is measured in terms of volume by applying to the quantities of products produced or imported the taxation prices of the base year or by applying to the value of output or imports, revalued at the prices of the base year, the tax rates of the base year.
- Similarly, the amount of subsidies on products (D.31) is measured in terms of volume by applying to the quantities of products produced or imported the subsidy prices of the base-year or by applying to the value of output or imports, revalued at the prices of the base-year, the rates of subsidy of the base-year, taking into account different subsidy prices for different uses.

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[2] Contant prices or volume estimates of GDP derived from the production or expenditure approaches. While some components of the income approach can be derived in volume terms (transformed into real measures) it is generally accepted that the operating surplus cannot be deflated directly and therefore, this approach is not expressed in volume terms independently.

[3] Single indicator method refers to direct extrapolation of value-added using volume indicators (e.g., for output) or direct deflation of VA using an appropriate deflator (this approach should be used as last resort). Single extrapolation implies that technical coefficients (input-output ratios) remain constant in volume terms, while single deflation implies constant ratios in current terms.

Recommended Actions:

- Develop a procedure to collect, organize, and manage detailed price statistics from Switzerland.
- Develop industry deflators for output and intermediate consumption based on comparable industrial economic structures to those found in the Swiss SUTs.
- Derive activities value added in volume terms as the balance between the deflated output and intermediate consumption.
- Calculate taxes and subsidies in volume terms to arrive at a volume estimate of GDP.
- Develop a framework to implement chain linking estimates.

Early Estimates/Quarterly GDP

31. The current dissemination schedule for GDP includes 3 versions of GDP. The first one is one year and three months after the reference year (t+15), the second almost two years after the end of the reference period (t+23), and the last one a year after that (t+35). The latter two versions include GDP breakdowns, while the first one is just the headline number.

32. Improving timeliness requires either earlier annual estimates and/or the development of quarterly GDP. To improve GDP timeliness, two avenues were discussed: enhancing the annual estimation process so that the first release can be issued with less than one year of lag or starting to produce quarterly GDP so that the first annual estimate is based on the sum of quarters. Either approach will require the collection of additional, timelier source data. Of particular interest are value added tax reports.

33. The availability of quarterly VAT data will enable the team to build output (and possible intermediate consumption) indicators by economic activity. This data will need to be analyzed and assessed against the historical tax data obtained from the annual tax files. Once the quality is checked and the data is deemed appropriate for its use as a proxy for output estimates, it can be used to impute the missing annual tax declaration, which has been the main reason for the late GDP calculation.

34. In parallel, the quarterly VAT data can be used to start populating an experimental quarterly GDP framework. As deflators will be available on a monthly basis, the initial estimates of quarterly VA can also be produced in volume terms (assuming fixed ratios). Moreover, since the VAT filing follows different schedules, the NA team will explore the possibility of gathering monthly data so that some information (at least for the main activities) could be assessed as a potential source for early indicators.

35. Given Liechtenstein's small and concentrated economy, the treatment of large enterprises should be central to the early-estimation method. Large enterprises and units with volatile activity should be identified separately by economic activity and institutional sector, and their filing status should be monitored before compilation. Where current-year tax data are missing for these units, the authorities should consider targeted follow-up, direct use of preliminary administrative information, or case-specific estimates based on recent accounts or indicators. This approach would reduce the risk that the first GDP estimate is driven by mechanical extrapolation for a small number of economically important units.

36. An enterprise-data approach can complement the use of quarterly VAT data. VAT data can provide timely activity indicators for turnover and can support quarterly GDP, while enterprise tax declarations remain the benchmark source for annual value added and income components. Over time, the authorities could develop a bridge between early enterprise-tax estimates, VAT-based quarterly

indicators, wage and employment data, and the final annual accounts. This would improve both the timeliness of the first annual GDP estimate and the consistency between annual and future quarterly GDP estimates.

Recommended Actions:

- Engage with the tax authority to request the transmission of individual quarterly VAT data at firm level with adequate industry classification.
- Evaluate the VAT data in terms of its coverage with respect to the annual collection, and in terms of its correlation with the annual records over time.

C. Insurance Activities

Overview

37. Current calculation methods indicated that insurance activity in Liechtenstein contributed negatively to GDP during 2020–23. The OS is investigating these counterintuitive findings, which were discussed intensively during the Mission. The industry is composed of domestic companies providing services locally and abroad, as well as foreign companies, mostly from Switzerland, providing services domestically. A substantial proportion of services provided include life and non-life insurance.

38. The insurance activity is measured in national accounts in the usual way, deriving value added as a balance between output (see formula below) and intermediate consumption. While the variables in the equation are clearly defined, the definitions and aggregations found in the source data sometimes make it difficult to match the concepts between the variables and the sources, and therefore, national accountants resort into alternative sources and the use of assumptions.

Output of insurance services = premiums earned

+ premium supplements

- adjusted claims incurred (benefits due, for life insurance)

- increases (+ decreases) in technical reserves and with-profits insurance

39. This becomes particularly relevant for the measurement of premium supplements, as the accounting definition may include/exclude components that the national accounts definition excludes/includes. In the context of the national accounts the premium supplements should include just the “investment income attributed to the policyholders” while in the accounting reports in Liechtenstein, it is unclear whether “other income” and some records under “other investment income” are solely attributable to policyholders.

ESA 16.27: *Premiums supplements are the income earned from the investment of the insurance technical reserves of the insurers, which represent liabilities towards the policyholders.*

40. These reserves arise because premiums are paid in advance of claims, allowing insurers to invest the funds temporarily. However, in the accounting reports, some other property income may be aggregated and therefore not accurately reflect the premium supplements. If the data required for the calculation of the insurance output using the recommended approach is not available,

the *ESA 2010* (16.51, and 16.53) notes that the sum of cost method can be used. In the case of Liechtenstein, both life and non-life insurance are compiled using the "sum of cost" approach.

Life and Non-Life Insurance Activities

41. The insurance activity consists of a mechanism whereby a group of entities agree on protecting themselves against unexpected significant financial shocks by contributing money to a common fund that is intended to be used to support any of the insured members in the case of occurrence of the unexpected event they are insured against. As mentioned before, the value added generated by these activities comes from the difference between their output and intermediate consumption. In broad terms, the output includes the contributions of the insured members (premiums), the financial gains earned by the available insurance funds (premium supplements), minus the payments paid (and due) to members that have gone through an unexpected event (claims). The intermediate consumption consists of the cost incurred to manage the funds and the insurance operations.

42. After a detailed review of the data sources available, the national accounts team has determined that it is now feasible to implement the appropriate accounting method to estimate the value added of insurance activities. New estimates have therefore been developed using the preferred conventional method. Adjustments may be needed for adjusted claims since the current versions are calculated using actual claims. This issue will become more important once quarterly figures are developed, as claims volatility may be greater at higher frequencies. However, the relevant institution is reviewing data reporting requirements, and the detail needed to apply the preferred method may no longer be available. If so, the national accounts team may need to continue relying on the current alternative method.

43. While all the new estimates show significant improvements in terms of their correlation with alternative sources and user expectations, the full adoption of the preferred method to life insurances requires additional research as some of the concepts included in the annual reports of companies are not clear enough to be allocated to premium supplements. The team will request the data provider (FMA) to clarify such concepts and provide more detailed data as needed. In the meantime, a modification to the sum of costs for life insurance activity was proposed, as the current formula underestimated the level of value added.

Recommended Actions:

- Adopt the conventional methods to calculate the insurance activity starting with non-life insurances and the Swiss insurers operations in Liechtenstein.
- Request the FMA return to the previous practice of providing detailed data by company as opposed to the aggregated report and take into consideration the NA data needs when modifying the report form.
- Once the detailed concepts and data become available, review and validate them, then re-evaluate the implementation of conventional methods for life insurance.

Health Insurance

44. Health insurance activity in Liechtenstein is carried out by privately owned companies. These companies intermediate between customers/patients and health service providers. They manage the risk of heterogeneous client portfolios, whose members are required to contract a "standard" health policy at a price set by the health insurance provider and approved by the government. Some groups of

the resident population, including minors and low-income households, are exempt from the insurance cost, which is covered by the government.

45. The treatment of health insurance subsidies is important for correctly measuring output and production. The government provides a subsidy to insurance companies as a measure to lower the financial burden on the population. These subsidies have features of both subsidies on products (D.31) and on production (D.39). In the absence of these subsidies, revenues are not sufficient to cover operational costs; therefore, these companies appear to operate as non-market producers. As a result, output should be calculated as the sum of costs, and operating surplus should be zero.

46. The current approach is to allocate the subsidy to the value of production at basic prices (subsidy on products) which makes sense from an accounting point of view since otherwise output would be negative. An alternative approach would be to consider this transaction a transfer to households, where the insurance company is just an intermediary.

Recommended Actions:

- Continue with the current approach but continue with the research and assess the best treatment and implement potential changes in the next revision cycle.

Pension Funds

47. Pension fund services refer to the financial and administrative activities performed by institutional units that manage and operate pension schemes. These services include collecting contributions, investing assets, managing risks, and disbursing retirement benefits. Pension funds are classified as financial corporations because they provide financial services to households by pooling contributions and investing them to meet future pension obligations.

48. The pension system's defined-contribution structure shapes the measurement of pension fund services. Liechtenstein's system falls into a defined contribution scheme type of pension funds, where benefits are defined exclusively in terms of the level of the fund built up from contributions made over the employee's working life and increases in value resulting from the investment of those funds by the pension scheme manager.

49. Similar to life insurance, the investment income on accumulated pension entitlements is recorded as being distributed to households. In the case of Liechtenstein, pension fund also owns property from which it generates additional income that is distributed to beneficiaries. The data source, which are the financial reports of these companies, include income records and transactions from which is not currently possible to isolate "Holding gains and losses" generated by the investment.

50. The output of pension funds in ESA 2010 is the value of the financial services they provide to members, measured by their operating costs and financed from investment income on pension entitlements. As the source data is not available to properly account for investment income, an alternative approach has been discussed and implemented, which relies on independent estimates of income based on a conservative rate of return on the companies' stocks, as opposed to using the records that include unrealized revaluation adjustments.

Recommended Actions:

- Discuss with the FMA (data provider) the possibility of gathering the investment income clearly differentiating the actual returns from the holding gains/losses. Once this data becomes available, revise the estimates.
- Continue the research and discussions with the financial authorities to determine an appropriate rate of return to stocks to apply the new proposed approach.
- Ensure that the method selected and data sources enable consistent time series estimates, including the need for linking two time periods.

D. Financial Intermediation Services

51. Financial intermediation services refer mainly to the services provided by banks, including services that are not charged through explicit fees. In the Liechtenstein National Accounts, bank output has two components:

- **Directly charged services:** These are explicit fees and commissions charged by banks. They are already captured in the tax administration data and banking statistics.
- **Indirectly measured services (FISIM):** These are services banks provide without charging a separate fee. Instead, banks earn an implicit service margin through the difference between the interest rates they apply to loans and deposits and a reference interest rate.

Directly Charged Services

52. The banking activity in Liechtenstein is important both domestically as well as cross border. Given its relevance there are at least three different data sources that can be used to measure their financial activity. While the measurement of the services provided by the banks should be straightforward from an accounting point of view, both detail and precision in the definition of transactions and the lack of harmonization of data sources make the compilation of this activity more challenging.

53. High cross-border activity makes the allocation of banking transactions particularly important. The financial sector in Liechtenstein is highly internationally oriented. Financial activity is not carried out only by domestic firms for domestic customers; therefore, the correct allocation of transactions and units involved is crucial to accurately estimating domestically provided and exported services, as well as the allocation of property income.

54. The data sources available have some particular features which make them all useful both as a contrast, to fill gaps, and to address timeliness issues. However, some of the sometimes-large transactions (e.g., “other interest income”) recorded seem to group more than one national account item and therefore assumptions are required to allocate them.

Recommended Actions:

- Explore the possibility of obtaining more detailed information on the item “other interest income” to ensure that these large and volatile items can be properly allocated to its corresponding transaction.

FISIM

55. Financial Intermediation Services Indirectly Measured (FISIM) are a key component of banking output and GDP. FISIM captures the implicit service margin that banks earn on loans and deposits when they do not charge customers directly. It affects GDP both through financial-sector output and through its allocation to the users of these services such as intermediate consumption, household final consumption, exports, or imports.

56. FISIM is calculated only on loans and deposits and should exclude interbank positions and interest flows on other financial instruments. For loans, the service charge is the difference between observed loan interest and the interest that would have accrued at the reference rate. For deposits, it is the difference between interest at the reference rate and observed deposit interest. Interest on securities, derivatives, equity, other receivables and payables, and other non-loan or non-deposit instruments should instead be assessed as property income or explicit financial services, depending on their economic substance.

57. The recent emergence of negative or highly volatile FISIM reflects the interaction between fast-moving reference rates and slower-adjusting customer rates. Negative FISIM can arise when loan rates fall below the reference rate or deposit rates exceed it. In Liechtenstein, this risk became more visible after 2021, particularly for household mortgage loans with fixed-rate or slow-adjusting terms, while sharp movements in household deposit margins also affected the results. Although negative FISIM can occur, it should be exceptional and should trigger a review of the reference rate, source data, and instrument coverage. This review is being undertaken by the OS, leading to planned updates in the methodology.

58. Several supplementary methods may help diagnose and reduce negative FISIM results. Additional approaches used by countries that have faced this situation include maturity matching, where lending is matched to a reference rate with a similar maturity structure, or the use of a vintage reference rate that better reflects the timing and terms of the underlying loans and deposits. Breakdown estimates by sector and instrument may also prove useful to identify the sources of this phenomenon. The team was encouraged to continue the review of the methods and sources, analyze the potential causes of these effects, and revise the estimates as needed.

59. The reference rate should approximate the pure cost of borrowing funds, excluding any service margin. The SNA allows the use of a single exogenous rate, a weighted basket of exogenous rates, or an endogenous rate, but also stresses that the choice should be reviewed during periods of volatility. An interbank rate may be suitable if it reflects relevant wholesale funding conditions, but it can produce implausible results if it moves sharply while retail loan and deposit rates adjust more slowly. For Liechtenstein, the suitability of the reference rate should therefore be tested against the currency, maturity, and risk characteristics of the underlying loan and deposit portfolio.

60. The current calculation brings together banking statistics and tax-administration data and summarizes FISIM by institutional sector and economic activity. The review should trace these summaries back to the underlying loan and deposit stocks, associated interest flows, and allocation keys to ensure that only eligible instruments are included. Particular attention should be given to items such as “other interest income” and “interest expense on other liabilities to customers”, which may combine several economic flows that should not all be treated as FISIM.

61. Currency and residency breakdowns are particularly important given Liechtenstein's strong cross-border banking activity. If a single reference rate is applied across currencies, the calculation may mix domestic monetary conditions with foreign-currency funding conditions. A practical first step would be to distinguish Swiss franc from non-Swiss-franc positions and then assess whether further currency detail is material. Resident and nonresident users should also be distinguished so that domestic output, exports, imports, intermediate consumption, and household final consumption are allocated consistently.

62. FISIM should also be kept analytically distinct from directly charged financial services. This distinction is important in Liechtenstein, where wealth management, cross-border banking, and other fee-generating services are significant. FISIM should cover only implicit margins on loans and deposits, while explicit fees and commissions should remain the basis for measuring other banking services. Keeping the two components separate will improve the interpretation of financial-sector output and reduce the risk of double counting or misclassification.

63. Any methodological change should be implemented through a documented revision exercise rather than an isolated annual adjustment. The revised method should be applied over a sufficiently long time-series to assess effects on levels and growth rates. This documentation will be important for explaining revisions to GDP, financial-sector output, intermediate consumption, exports, and imports, and for ensuring consistency between annual benchmarks and future quarterly estimates.

Recommended Actions:

- Explore the possibility of obtaining the bank information on a quarterly basis to derive FISIM at that frequency.
- Assess the data sources to determine whether FISIM can be calculated independently broken down by currency.
- Assess the feasibility of deriving FISIM estimates by institutional sector and/or maturity.

E. RESEARCH AND DEVELOPMENT

64. The estimation of research and development is based on two types of sources. Benchmarks estimates are derived every four years based on a survey that is targeted at firms that engage in R&D. The interim estimates are based on an annual member survey conducted by the Liechtenstein Chamber of Commerce and Industry (LCCI) that record the expenses made by firms on activities related to R&D. Once the new survey of the Office of Statistics is available the interim years are revised to match the new benchmark.

65. The current depreciation assumptions for research and development should be reviewed as better evidence becomes available. The current estimates are conducted at an aggregate value and are assumed to depreciate linearly over a span of ten years.

Recommended Actions:

- Based on existing data sources and publicly available studies, explore the feasibility of determining the investments and stock by type of asset, review the current assumptions used regarding the life spans of the assets, and reevaluate the depreciation rates.

F. REVISION POLICY

66. Revisions are a necessary component of national accounts compilation because they allow statistical agencies to balance the need for timely data with the goal of producing accurate, comprehensive, and reliable estimates. Initial estimates are often based on incomplete information and are later updated as better source data, improved methods, new classifications, or international standards become available. When managed transparently, revisions improve the quality and continuity of time series rather than weakening trust in official statistics.

67. A sound revision policy should be well planned, coordinated across statistical domains, communicated in advance, and based on a predictable schedule. It should explain the reasons for revisions, provide users with access to long revised time series, and document changes clearly in publications and databases. Special revisions that significantly affect historical data should be announced ahead of time and accompanied by explanations and impact assessments. Revisions should also be analyzed systematically to identify persistent patterns or possible bias, helping improve future estimates. Categorizing revisions by sources such as conceptual, methodological, source-data, quality, accounting, or presentational changes—can further support transparency and user understanding.

Recommended Actions:

- Elaborate a revision policy encompassing all related products within the national accounts program.

G. OtHER MEETINGS HELD

68. The mission visited the Liechtenstein Institute to meet with the coordination group to discuss some of the findings a recommendation. As the group is represented by the main users and date providers in the country, it became apparent that the timing and topics of the mission were relevant for these stakeholders. The group was made aware of the different workstreams that are required for the enhancement of the national accounts, and their phased timing. The groups appreciated the efforts and recommendations made towards deriving GDP at constant prices, improving the timeliness of GDP (including the development of quarterly GDP), refining the compilation methods for the financial activities, and future enhancements to the dissemination.

69. The Office of Statistics presented progress on developing and implementing its internal quality framework. The framework covers several quality dimensions, has been implemented within the Office and remains open to additional dimensions.

70. The mission and counterparts met with staff from the Office for Public Health which supervises Liechtenstein's health insurances to better understand how health insurance operates, from price setting to the allocation of government subsidies. The meeting clarified the mechanisms used to ensure Liechtenstein's population, the interactions with health service providers, the allocation of subsidies, and the arrangements for managing insurers' differing risk profiles.

71. The FMA is both a key user of national accounts data and a major provider of source data for the financial sector. Discussions focused on expanding data-sharing protocols, including quarterly data transmission to compile financial activity and FISIM at that frequency, and on exploring whether more detailed source data are available to identify and explain financial flows currently reported only in aggregate form.

TABLE 3.

Priority	Action/Milestone	Target Completion Date
Outcome*: *National Accounts statistics are compiled and disseminated on a frequency consistent with the country's subscription to the IMF data standard.		
Topic: Financial Sector - Insurance		
H	**Adopt the conventional methods to calculate insurance activity, starting with non-life insurance.**	Nov. 2026
H	**Request the FMA to return to providing detailed data by company rather than only aggregated reports.**	Nov. 2026
H	**Refine the sum-of-costs approach for life insurance.**	Nov. 2026
H	**Once detailed concepts and data become available, review and validate them, then re-evaluate implementation of conventional methods for life insurance and Swiss insurers' operations in Liechtenstein.**	Nov. 2027
H	**Refine the calculation method (technical provisions) used to measure the services provided by Swiss-owned insurance companies**	Nov. 2026
H	**Explore whether more information is available to refine the allocation of services provided by Swiss-owned insurance companies in Liechtenstein**	Nov. 2026
H	**Continue the current approach to health insurance, while researching the best treatment and implementing possible changes in the next revision cycle.**	Nov. 2026
H	**Continue research and discussions with the Financial Markt Authority to determine an appropriate rate of return on stocks for the proposed pension-fund approach.**	Nov. 2027
H	**Explore obtaining more detailed information on "other interest income" to allocate large and volatile items properly.**	Nov. 2027
Topic: Financial Sector - FISIM		
H	**Discuss with the FMA the possibility of gathering investment income data that clearly separates actual returns from holding gains/losses, then revise estimates once available.**	Nov. 2026
H	**Replace the data source used to derive operating costs from "other investment income" with a risk-free return on assets used by pension funds.**	Nov. 2026
H	**Explore obtaining bank information quarterly to derive FISIM at that frequency.**	Nov. 2027
H	**Assess whether FISIM can be calculated independently by currency.**	Nov. 2027
H	**Assess the feasibility of deriving FISIM estimates by institutional sector and/or maturity.**	Nov. 2027
Topic: GDP in volume terms		
H	**Develop a procedure to ingest, organize, and manage detailed price statistics from Switzerland.**	Nov. 2026
H	**Develop industry deflators for output and intermediate consumption using comparable structures from Swiss SUTs.**	Nov. 2026
H	**Derive activity value added in volume terms as the balance between deflated output and intermediate consumption.**	Mar. 2027
H	**Calculate taxes and subsidies in volume terms to arrive at a volume estimate of GDP.**	Feb. 2027

Priority	Action/Milestone	Target Completion Date
H	Develop a framework to implement chain-linked estimates.	Nov. 2027
Topic: National accounts timeliness and enhancements		
H	Engage with the tax authority to request transmission of quarterly VAT data.	Nov. 2026
H	Evaluate VAT data coverage relative to annual collections and its correlation with annual records over time.	Jun. 2027
H	Develop the framework to compile experimental quarterly GDP	Mar. 2028
H	Explore whether existing data sources and public studies can support determining R&D investments and stock by asset type, reviewing asset lives, and re-evaluating depreciation rates.	Nov. 2027
H	Elaborate a revision policy covering all related national accounts products.	Mar. 2028
H	Assess the feasibility to hire (on contract) a "data engineer" to support the development, modernization, and automation of the statistical production system used in the national accounts (as soon as feasible)	H1. 2027

H. OFFICIALS MET DURING THE MISSION

TABLE 4.

Name	Institution	E-mail Address
Franziska Frick	*Office of Statistics*	franziska.frick@llv.li
Simon Gstoehl	*Office of Statistics*	simon.gstoehl@llv.li
Daniela Sele	*Ministry of General Government Affairs and Finance*	daniela.sele@regierung.li
Samuel Planet-Duelli	*Office of Statistics*	samuel.planet@llv.li
Lukas Lenz	*Office of Statistics*	lukas.lenz@llv.li
Mario Schaedler	*Office of Statistics*	mario.schaedler@llv.li
Priska Heinzle	*Office of Statistics*	priska.heinzle@llv.li
Michael Hilbe	*Office of Statistics*	michael.hilbe@llv.li
Marco Merle	*Financial Market Authority*	marco.merle@fma-li.li
Martin Rutishauser	*Financial Market Authority*	martin.rutishauser@fma-li.li
Elias Hasler	*Financial Market Authority*	elias.hasler@fma-li.li
Andreas Brunhart	*Liechtenstein Institute*	andreas.brunhart@liechtenstein-institut.li
Martin Geiger	*Liechtenstein Institute*	martin.geiger@liechtenstein-institut.li
Walter Sinn	*Office of Public Health*	walter.sinn@llv.li

Appendices

A. APPENDIX A. PRODUCTION AND INCOME ACCOUNTS

Table 19.1: Summary of the current accounts in the sequence of economic accounts

Table 19.1:Summary of the current accounts in the sequence of accounts

Expenditures						Revenues			
Total economy	Rest of the world	Goods and services	Total	Code	Transactions and balancing items	Total economy	Rest of the world	Goods and services	Total
		499	499	P7	Imports of goods and services		499		499
		392	392	P71	Imports of goods		392		392
		107	107	P72	Imports of services		107		107
	540		540	P6	Exports of goods and services			540	540
	462		462	P61	Exports of goods			462	462
	78		78	P62	Exports of services			78	78
					Production account				
		3 617	3 617	P1	Output	3 617			3 617
		3 075	3 075	P11	Market output	3 075			3 075
		147	147	P12	Output for own final use	147			147
		395	395	P13	Non-market output	395			395
1 881			1 881	P2	Intermediate consumption			1 881	1 881
		141	141	D21	Taxes on products	141			141
		- 8	- 8	D31	Subsidies on products (-)	- 8			- 8
1 869			1 869	B1g	Value added, gross / Gross domestic product				
222			222	P51d	Depreciation				
30			30	P8	Depletion				
1 617			1 617	B1n	*Value added, net / Net domestic product*				
	- 41		- 41	B11	*External balance of international trade in goods and services*				
					Generation of earned income account				
				B1g	Value added, gross / Gross domestic product	1 869			1 869
				B1n	*Value added, net / Net domestic product*	1 617			1 617
1 150			1 150	D1	Remuneration of employees				
235			235	D2	Taxes on production and imports				
141			141	D21	Taxes on products				
94			94	D29	Other taxes on production				
- 44			- 44	D3	Subsidies				
- 8			- 8	D31	Subsidies on products				
- 36			- 36	D39	Other subsidies on production				
467			467	B2g	Operating surplus, gross				
61			61	B3g	Mixed income, gross				
214			214	P51d1	Depreciation on gross operating surplus				
8			8	P51d2	Depreciation on gross mixed income				
30			30	P81	Depletion on gross operating surplus				
0			0	P82	Depletion on gross mixed income				
223			223	B2n	*Operating surplus, net*				
53			53	B3n	*Mixed income, net*				
					Allocation of earned income account				
				B2g	Operating surplus, gross	467			467
				B3g	Mixed income, gross	61			61
				B2n	*Operating surplus, net*	223			223
				B3n	*Mixed income, net*	53			53
	6		6	D1	Remuneration of employees	1 154	2		1 156
			0	D2	Taxes on production and imports	235			235
			0	D3	Subsidies	- 44			- 44
391	44		435	D4	Property income	397	38		435
- 18			- 18	D42dep (-)	Depletion borne by the legal owner	- 18			- 18
1 879			1 879	B5g	Balance of earned incomes, gross / National income, gross				
1 627			1 627	B5n	Balance of earned income, net / National income, net				

Definitions of the transactions included in the Production accounts

Market production: Starts from tax administration data and adjusts it to align with ESA 2010 concepts. Adjustments are made for specific industries such as agriculture, trade, banking, insurance, real estate, government units, non-profits, missing enterprises, and territorial residency issues. Results are checked against prior-year data and banking statistics, then allocated by institutional sector.

Production for own use: Includes R&D, owner-occupied housing services, domestic services, own-account capital formation, and estimated own-use production by legal entities. Some components are estimated from surveys, census data, payroll tax data, or historical ratios, while agricultural own-use output and household own-construction remain difficult to measure reliably.

Non-market production: Covers government, municipalities, social security funds, public institutions, foundations, and private non-profits that cover less than half their costs through sales. Output is measured from the cost side, mainly using intermediate consumption, compensation of employees, depreciation, and other production taxes less subsidies. Market or secondary market activities are deducted where relevant.
Intermediate consumption Intermediate consumption is derived from tax data and adjusted by industry and transaction type.

Taxes, subsidies, and depreciation: Product taxes are estimated either through Swiss-Liechtenstein apportionment keys or Liechtenstein-specific tax revenues. Product subsidies are taken from government accounts. Depreciation is estimated through pragmatic workarounds because comprehensive fixed-asset data are not available.

Deviations from the international standards

- **Own-account capital formation by enterprises:** ESA 2010 would treat this separately, but in the National Accounts FL it remains embedded in market production because it cannot be isolated reliably from sales data.
- **Agriculture:** Intra-farm deliveries are treated more broadly than ESA 2010, which may overstate both output and intermediate consumption, although value added is unaffected. Agricultural output is also recorded at harvest or sale rather than continuously over the production cycle, which can shift output between years.
- **Agricultural own-use production:** Own-use output by farming households is either not recorded or may be valued using flat-rate farm-accounting estimates, which may differ from ESA valuation principles.
- **Domestic workers' benefits in kind:** Benefits such as food and accommodation are valued using payroll-tax conventions, which may differ from ESA valuation at basic prices.
- **Household own-account housing construction:** Household labor used to build or expand own homes cannot be measured reliably and is therefore not fully captured.

- **Intermediate consumption of insurance services:** Instead of calculating the service charge from actual claims and changes in provisions as ESA 2010 recommends, the accounts use a schematic estimate of **34 percent of insurance premiums**.
- **License fees:** ESA 2010 would sometimes classify license fees as intermediate consumption, but the National Accounts FL record all authorization fees as other production taxes because the source data cannot distinguish the two cases.
- **Product subsidies:** ESA 2010 uses accrual recording, but the National Accounts FL record subsidies in the year they are paid.
- **Depreciation:** ESA 2010 recommends estimating consumption of fixed capital from fixed-asset stocks or the perpetual inventory method. Liechtenstein instead uses pragmatic workarounds based on Swiss comparisons, gross value-added ratios, and tax depreciation data because comprehensive fixed-asset and investment data are unavailable.