PUBLIC DEBT MANAGEMENT OFFICE:
MAIN FUNCTIONS AND REQUIRED SKILLS

The functions and required skills of the three main divisions of a Debt Management Office (DMO) - namely, the Front, Middle and Back Offices - will be described in this note. In addition, there is a similar description for a Legal Unit of the DMO, which is sometimes included in one of the other offices.

1. FRONT OFFICE - PORTFOLIO MANAGEMENT UNIT

The Front Office (FO) or portfolio management unit is responsible for the analysis and efficient execution of all portfolio transactions, consistent with the debt management policy and strategy. The degree of sophistication of its functions will largely depend on the types of funding available for that particular country. Typically there will be a learning curve as countries advance from official sources (concessional and non-concessional multi-lateral and bi-lateral) to more market-based funding, both domestic and international. The learning curve continues as the DMO starts using debt transactions such as exchanges and buy-backs, as well as hedging transactions including derivatives such as currency and interest rate swaps. The FO may also be involved in transactions of on-lending to sub-national governments and extending guarantees of various types to other government entities and/or the private sector. In some countries it may also be involved in executing cash management operations.

1.1 Typical Front Office Functions

- Designing and executing funding transactions, both from domestic and international sources of funding. This may involve an analysis of competing financial proposals across different currencies, markets, maturities and transaction structures. Steps can include the evaluation, negotiation, pricing, launch of bond issues/contracting of loans, and subsequent market monitoring.
- Designing and executing trading and hedging transactions, to move the actual debt portfolio closer to the strategic targets or benchmark (e.g. including debt buy-backs and exchanges, interest rate and currency swaps, etc.)
- Continuous monitoring and reporting of market conditions, including analysis of its potential investor base, both domestic and international.
- Managing investor relations, possibly both domestic and international.
- Investing foreign currency liquidity and any excess cash balances associated with the government’s daily departmental cash management (in countries where the DMO is responsible for cash management).
- Analyzing projections of funding needs (in partnership with the middle office and Treasury/fiscal unit) and giving input on implications for a funding strategy.
- Providing input on the design of a sovereign’s funding strategy (together with middle office).
- Offering advice on government policy initiatives to foster the development of the primary and secondary government bond markets
- Offering advice on possible market reaction to new fiscal information
- Evaluating funding requests by SOEs and sub-nationals (relevant in some countries, and possibly in partnership with the middle office) which would result or not in an authorization from the DMO for their contracting new debt; or possibly in on-lending by the central government
- Evaluation of expected cost/pricing of contingent liabilities such as guarantees (e.g. by the central government to SOEs) (in some countries and possibly in partnership with the middle office).

1.2 Front Office Skills Required

The mix of skills will be important, and will differ according to the level of development of the country and the markets being sourced for funding and debt management transactions.

The degree of training required will depend on whether the new staff already has the required type and level of skills, or whether it is necessary to build up some or most of these modules:

- Advanced finance and financial markets know-how (money markets, debt markets both international and domestic, primary and secondary, main players, etc.)
- Knowledge of non-market sources of funding, e.g. IFI’s and their funding characteristics
- General macroeconomic notions
  - In particular, links of debt management with monetary policy, cash management and fiscal policy
- Knowledge of the role of a modern debt management office and within it, the functions and responsibilities of the three main divisions
- Public policy skills (e.g. to carefully manage relations with the markets in a suitable context, and understanding risk-taking in a public sector context).
- Strong communications skills (e.g. for managing investor relations, negotiations, etc.)

More precisely, knowledge of:
- Analysis, pricing and execution of:
  - funding transactions (domestic and international; capital markets, non-capital markets)
  - debt management related transactions, such as derivatives including currency and interest rate swaps, debt exchanges (e.g. by maturity,) buy-backs of illiquid bonds, etc.
  - guarantees extended by central government
• Conceptual framework for portfolio and risk management, the role of strategic targets and/or benchmarks in public debt management, and the role of the front office in complying with a benchmark
• Monitoring of, and reporting on, different financial markets and market participants, both domestic and international; (including knowledge of Reuters, Bloomberg, etc.)
• Relationship management with market intermediaries and investors
• Public finance and cash management and how to determine the government’s funding needs;
• Domestic government money market and bond markets, so as to be able to provide advice on policy initiatives to foster the development of the primary and secondary government markets
• Investment of foreign currency liquidity and excess cash balances associated with daily cash management (in those countries where the DMO is also in charge of cash management).
• Pricing of guarantees and other contingent liabilities, and methodologies for evaluating expected cost (with middle office staff)
• For some offices, evaluation of funding requests by SOEs and sub-nationals, so as to provide them with the corresponding authorization (with middle office staff)
• English language training, if transacting in the international markets
• Specialized IT training (related to pricing of transactions, market monitoring and reporting, practical knowledge of Bloomberg, Reuters, etc.)
2. MIDDLE OFFICE – ANALYSIS AND COMPLIANCE UNIT

The core competence of the Middle Office is the design of a public debt strategy, for final authorization of senior government authorities, which will involve risk/cost modeling and an analysis of macroeconomic and market constraints. Another important but more operational function is monitoring and compliance. In those countries where the DMO is also involved in cash management the MO will participate in proposing a strategy for managing the portfolio of cash surpluses.

2.1 Typical Middle Office Functions

Middle Office (MO) functions typically include:
- Risk modeling of the aggregate debt portfolio (initially deterministic scenario analysis and subsequently stochastic simulations)
- Analysis of potential constraints on debt portfolio management (macroeconomic, financial market, etc.) and their influence on debt strategy
- Debt strategy formulation and design of strategic targets and/or benchmarks
- In some DMOs, acting as Secretariat to a Debt Management Committee which advises the Finance Minister on debt management strategy, both on design and monitoring of execution.

Many MO’s in debt offices also handle one or more of the following areas:
- Monitoring compliance with the established portfolio and risk management policies including regular reports monitoring market and credit risk
- Performance assessment (if there is active trading vis-à-vis the strategic targets)
- Preparation of input to the state budget (reports on debt servicing forecasts, etc.)
- Operational risk control (together with back office)
- Producing reports on debt management for different parties (e.g. the Finance Minister, the Debt Management Committee, Congress, multilaterals), etc. and providing input on debt management to the corresponding website (working closely with the Back Office)
- New product development
- For some debt management offices in LICs, knowledge of Debt Sustainability Analysis, in conjunction with other government units and the central bank (ideally this would be carried out by the Fiscal Policy Unit, not the DMO)
- For some DMOs, the MOF may be involved in analyzing cost risk trade-offs and designing a strategy for the management of cash surpluses.
2.2 Middle Office skills required

The skills requirements listed below are needed to create a strong Middle Office function. The mix of skills will be very important for the success of a middle office, and will differ according to the level of development of the country, the ambition of the Ministry of Finance for the development of this area and the level of risk exposure of the government to different types of financial risk. In general terms there is a need for the following:

- Advanced technical skills in finance and risk analysis, in particular, risk quantification and portfolio management
- Financial market skills; given the impact from debt management on debt market development, an understanding of the workings of the local markets is also important
- Experience in managing the types of market, credit and operational risks associated with the Middle Office’s responsibilities.
- Public policy skills – an understanding of the role of debt management within the context of the overall macroeconomic policies. Preferably some experience in public sector financial management and some macroeconomic knowledge for analyzing integration with the rest of the economy
- Strong mathematical and modeling skills
- IT skills are necessary for quantification of cost and risk of the government’s debt; at a minimum, advanced knowledge in the use of spreadsheets, but ideally strong skills in different analytical software packages. For many countries, a practical knowledge of Bloomberg/Reuters is required.
- Strong communication skills – ability to translate analysis into material than can be the basis for the Ministers decisions on debt management

More specifically, good working knowledge of:

- Debt risk indicators and reporting on debt portfolio profile
- Risk modeling of debt servicing cash flows; scenario analysis, stochastic analysis
- Debt strategy design, and the influence of other considerations apart from cost/risk tradeoffs, on the debt management strategy (e.g. the need to develop the domestic money and debt markets)
- ALM framework for public debt management (and possibly cash management)
- How to monitor compliance with the established portfolio and risk management policies including regular reports monitoring market and credit risk
- Performance assessment (if there is active trading vis-à-vis the strategic targets)
- Preparation of input for the Government budget (reports on debt servicing forecasts, etc.)
- Operational risk control (together with back office)
- Producing reports on debt management for different parties (e.g. the Finance Minister, the Debt Management Committee, Congress, multilaterals), etc. and providing input on debt management to the corresponding website (working closely with the Back Office)
- New product development
For some DMOs in LICs, knowledge of Debt Sustainability Analysis, in conjunction with other government units and the central bank (ideally this would be carried out by the Fiscal Policy Unit, not the DMO)

For some DMOs, the MOF may be involved in analyzing cost risk trade-offs and designing a strategy for the management of cash surpluses.
3. THE BACK OFFICE

The core competence of the back office is operational, involving transaction confirmation, settlements, reconciliation and payments, as well as maintaining records of new contracts, disbursements, payments, debt restructuring and on-lending. In some countries the DMO may be requested to have a register of debt of sub-national entities.

3.1 Typical Back Office Functions

The typical responsibilities of the Back Office (BO) are:

- Confirmation of the transactions undertaken by the front office, i.e. independently verifying with the counterparty’s back office that the terms of the transaction are as the front office stated;
- Settlement of the transactions once they have been confirmed, i.e. issuing/receiving payment instructions to/from counterparties;
- Reconciliation of bank and custody accounts to ensure that they agree with the organization’s own records.

In addition, there are usually a number of administrative functions that are undertaken by the BO, including:

- debt registration and management of the debt data base (which may include not only the central government debt, but also debt of sub-nationals and SOEs, as well as guarantees of various sorts)
- administering loan documentation
- external reporting requirements (together with the middle office, but at a minimum providing basic statistics)
- operational risk management, including business continuity and disaster recovery arrangements, as well as documented guidelines for overall operational risk management
- managing the relationships with fiscal agents (e.g. the central bank)

3.2 Back Office Skills required

The BO handles very significant transactions and processing errors can be extremely expensive. Improved technology can help reduce the incidence of these, but few systems are failsafe. Therefore the BO requires professional staff with strong operational skills, including strong numeric skills, attention to detail, an ability to follow procedures and identify quickly when exceptions have occurred. More senior settlements staff will need negotiation skills, to manage exceptions with counterparties, and be able to stand up to front office staff, who typically enjoy a higher status in the organization.
The degree of training that will be required will depend on the extent to which the DMO can “buy” as opposed to “build” the skills it needs. To obtain the specialized knowledge listed above, the vendors of IT systems (e.g. DMFAS and COMSEC) and operators of payment and custody systems and exchanges usually provide training.

External training may also be possible in areas where the local private sector has similar requirements, e.g. the management of operational risk, training in market instruments for settlements staff.

In most DMOs, there is significant on-the-job training of back office staff in addition to external sources, because of the unique mix of instruments and IT systems that a sovereign borrower uses. Also, all organizations have developed procedures to manage operational risk which, while similar in principle, may differ in detail. For this reason, it is important that sufficient senior staff are retained to train new employees and ensure continuity of knowledge in the organization. This can be supplemented by cross-training and rotation through different positions.

In order to perform their role, BO staff require specialized knowledge that will reflect the environment in which they work, including:

- Basic finance and financial markets
- Basic accounting
- Administration of loan documentation
- Strong IT skills
- the rules and conventions of the payment systems, custody systems and exchanges that they use (both in the local and international markets), as well as how to use any electronic interfaces with these entities;
- an understanding of the financial instruments in which their organization transacts;
- management of the IT systems the organization uses for transaction processing and debt recording (e.g. COMSEC, DMFAS etc).
- administrative procedures of the lenders and/or donors from which they borrow;
- other procedures and requirements of external organizations, e.g. for reporting purposes.

More specific public debt management skills required would include:

- Debt registration and database management in the particular IT system being used by that DMO
- Reporting and statistics required by third parties (e.g. IFI’s) and by law
- Settlement and payment systems in use and for potential use
- Operational risk management for DMOs
4. **LEGAL UNIT**

Debt managers must ensure that they receive appropriate legal advice and that the transactions they undertake incorporate sound legal features. As such the legal unit, or the lawyers incorporated in one of the main units e.g. MO, have an important role to play.

4.1 **Typical Debt Office Legal Functions**

Typically, the legal staff/unit of the debt management office should:

- Actively contribute towards ensuring that the DMO’s operations are conducted according to the law.
- Provide assistance in the form of legal research and advice, especially on new operations such as derivatives (e.g. swaps)
- Participate in the drafting of the regulations governing the activities of the DMO, and the primary and secondary markets of Government securities.
- Take an active part in negotiations on contracts, and ensure that the ‘legal’ clauses do not excessively bind the borrower, that the borrower can fulfil its obligations without undue hardship, and that the contract at least is not stricter than the contracts entered into by other sovereign borrowers with similar credit status.

4.2 **Debt Office Legal Skills required**

The degree of sophistication of its skills requirements will largely depend on the types of funding available for that particular country. Typically there will be a learning curve as countries advance from official sources (concessional and non-concessional multi-lateral and bi-lateral) to more market-based funding, both domestic and international.

The learning curve continues as the DMO starts using debt transactions such as exchanges and buy-backs, as well as hedging transactions including derivatives such as currency and interest rate swaps. The FO may also be involved in transactions of on-lending to sub-national governments and extending guarantees of various types to other government entities and/or the private sector. In some countries it may also be involved in executing cash management operations.

As long as the DMO only borrows and enters into transactions in the domestic market, it is enough that the lawyers have solid knowledge of the domestic legal system, particularly financial and public law. Once the DMO transacts in foreign markets, broader skills and knowledge are required, as the foreign legal system will determine what the borrower legally can do. As most of the foreign capital markets have some form of consumer protection, the lawyer should be aware and check that the requirements for soliciting and offering securities to retail investors have been met.

Also, loan documentation becomes more complex once the borrower enters foreign markets. Here the sovereign must be prepared to follow the rules of the market. The
banks/investors normally want the same protection as they have when lending to main corporate borrowers, i.e. representations and warranties, default clauses (sometimes even cross-defaults and cross-acceleration clauses), negative pledge, and a waiver of sovereign immunity. Apart from being capable in reading and understanding these loan contracts, the lawyer also must be a skilled negotiator. The legal unit normally is the only function within the DMO which keeps record on the contractual restrictions on the sovereign.

Once the borrower enters the international derivatives market, the legal issues become even more complicated. The standard agreement used, the ISDA agreement, is complex. The lawyers also must check if the contract is enforceable against the counterparty, which is governed by the counterparty’s home jurisdiction. If some kind of credit support for the exposure is called for, foreign rules on pledges also need to be reviewed.

More specific needed skills include, but are not limited to, knowledge of:

- Public sector law, in particular, law for public sector indebtedness, on-lending, guarantees, etc.
- Basic finance for lawyers, including financial markets and IFIs and official sources of funding
- Financial instruments, both domestic and international, and hedging instruments, and debt-related transactions and their contracts (e.g. debt exchanges and buybacks, guarantees and on-lending contracts)
- Legal negotiation of funding and bond issuance contracts
- Drafting of regulations governing the DMO
- Basic international securities legislation
- Important clauses in international financial agreements
- Structure of the ISDA agreement and related legal issues in derivatives transactions