INSTITUTIONAL ASSESSMENT AND REFORM OF THE ROMANIAN FSA (ASF)

A Report on ASF's Regulatory & Supervisory Policies and Regime, its Business Architecture and Information Technology Solutions, and Recommendations for Organizational and Policy Reforms

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SUMMARY MATRIX OF ISSUES AND RECOMMENDATIONS

ISSUE	RECOMMENDATION	Target Timing
Institutional Strategy Vision to Modernize ASF	Define new strategy vision based on efficiency and risk basis of supervision to develop markets, that should be inculcated	Short Term
Governance and Management Issues	Institute all independent non-executive board members except the Chairman	Medium term
	Cut out stages of management review/delegate several actions	Short
	Flatten organization further	Short
Regulatory Upgrading and Modernization	***Insurance***: Fast track intensive training program for Solvency II	Short
	Pensions: reduce regulatory fees and examine their effects against the profitability of PFMCs.	Medium term
	Revise pension capital guarantee and relative return guarantee to promote higher yielding portfolios	Medium term
	Allow interest rate derivatives and OTC bond trades for PFMCs	Short
	Develop benchmark portfolios to measure fund performance and institute lifecycle funds	Medium
	Provide better 3rd pillar tax and vesting incentives to employers	Short
	Securities: Implement regulatory changes based on the 8 barriers report	Short
	Institute project to streamline and upgrade capital market regul. framework and modernize, upgrade and make more efficient the several procedures related to IPO issuances and corporate bonds	Medium term
	Institute new processes and procedures to allow for an effective and meaningful internal & external consultation process	Short term
Supervisory Upgrading of Standards and Procedures	***General:*** Supervision to be focused on understanding risks to the market and regulated entities vs. rule based compliance	Short term
	Have supervisors/inspectors cover all activities of the same entity(ies) for 2-3 years (off and on site) to have the big picture	Medium term
	Automate document collection/processing to reduce inspections length; and automate compliance checks via technology feeds	Medium
	Ensure consistent methodology for asset valuation and source of information across sectors	Short term
	Implement a system of graduated binding warnings of non compliance to entities, prior to applying sanctions, and for serious offenses increase the sanction level.	Short term
	Insurance: off-site: analyze key balance sheet metrics more critically with longitudinal and market comparative analysis	Medium term
	On-site: Upgrade inspectors' review of entities' risk	Short

	assessment indicators and systems. Consult informally frequently with industry	term
	Pensions: identify key PFMC/Fund risks and incorporate into on and off site supervision, the rankings of such risks, and eliminate lengthy compliance-based checking inspections.	Short term
	Securities: Comprehensive supervision of entities to incorpo-rate Exchange data on volumes/transactions, client positions & order books, and operational, governance, conduct procedures.	Short term Short term
	Coordinate market surveillance, intermediaries supervision, and complaints (consumer and market) for a full risk assessment	Medium
	Implement a CCP to reduce a key layer of risk	Medium
	Supervision of market operators to include IT systems assessment (trading & settlement) with a focus on risks	Short term
	For on-site inspections include cross check of separate rules and control processes for brokers, the CSD and BSE	
Organizational Structure Reengineering	Increase staff size of organizational units and directorates to meaningful sizes (directorates = 40; units = 10).	Short term
	Merge the on-site and off-site supervision function to ensure synergies and overall risk view of a regulated entity	Short term
	For pensions and possibly insurance, consider merging licensing with other units and rationalizing the agent registration process	Short term
	In medium-term organize ASF based on functional pillars (e.g., approval, supvn., reg.) with all sectors under one pillar head.	Medium term
	Create a licensing committee including representatives from each sector of ASF to approve all sectors' regulated entities	Short term
	Create a policy, risk and standards directorate instead of integrated supervision and include research and regulation	Short term
	Create matrix distributed staff of certain specialties (legal, other) reporting centrally but residing within client units physically	Short term
	Remove support units from reporting to the President and place them under an Administrative VP	Short term
	Have the new Policy, Risk, Standards Unit as well as PMO office and PR report directly to the President	Short term
	Given the above changes, eliminate the 1st VP position	Short
Capacity building programs in updated regulation and supervision	Develop and implement an intensive training programs with exams, to upgrade and reorient staff skills on regulatory and supervisory approaches	Medium term
Business Architecture and IT Systems	Reduce the layers of complex and labor-intensive manual review, endorsement and decision processes	Short term
	Reduce, automate and install electronic controls and signatures for complex business processes such as licensing, supervision data processing, inspection documents, and complaints info.	Medium term
	Digitize, integrate and automate manual and excel data entries in the HR, financial management and administrative functions	Medium term
	Enhance IT systems to ensure security, privacy, business continuity and disaster recovery	Medium term

	Centralize and digitize ASF's records management and document processing system	Medium term
	Ensure that ASF systems reach standards allowing them to fulfill all requirements/controls under an IT Audit.	Medium term

INSTITUTIONAL ASSESSMENT AND REFORM OF THE ROMANIAN FSA

I. INTRODUCTION

1. **The Romanian Financial Supervisory Authority (ASF) is undergoing a period of transition.** After its initial creation via the merger of three separate supervisory authorities covering the securities markets, the pension industry and the insurance sector, the institution reformed its board composition, reduced its number of members, and a new President of the institution was appointed. Under the new leadership, ASF is undergoing a process of reorganization, integration and consolidation in order to operate more effectively as a supervisory agency and to modernize its approach and methods.

2. **The institution faces several challenges, not least of which is the harmonization of its regulatory and supervisory approaches across the different sectors of the financial system that it oversees.** Besides the harmonization and consistency of approaches needed, the ASF also requires some upgrade and modernization of its regulatory approach and a reorientation of its supervisory methods from a strictly compliance-oriented to risk-based supervisory tactics. Several of these reforms will be greatly facilitated via the modernization and updating of ASF's information technology capabilities and overall business architecture which should also substantially reduce the number of internal transactions, compliance checks, approvals, reviews and controls currently used to conduct its daily business.

3. **This report takes a holistic approach to the needed reforms in regulation, supervision, risk management, business processes and organizational structure.** The analysis in this report is not limited to recommendations for institutional reform based on the more efficient and effective carrying out of existing functions, but also on defining what should be ASF's value-added functions and their implications for organizing itself and carrying out supervision activities.

4. **The report also takes as a starting point for analyzing ASF's critical needs, the recently proposed new organizational structure which already constitutes a first important step.** This yet-to-be-approved structure continues to undergo some changes, therefore within this report there may be references to a proposed new change to this structure that may have already been superseded by subsequent modifications and discussions by top management. This report assumes though, that as per recent recommendations, the design of the new organization will retain Directorate Managers while removing Department Head positions, and will remove the Assistant Manager layer but retain the positions of Heads of Service Units.

A. Institutional Strategy

5. **ASF needs a new institutional strategy and vision to guide its reform.** This implies that is also needs a significant change in corporate culture and approach in the institution towards its core functions. ASF currently does have a worthy "mission statement," expressed as follows:[1]

> "The Financial Supervisory Authority contributes to strengthening the integrated framework for the operation and supervision of non-bank financial markets, participants and transactions in these markets and has the following objectives:
>
> • stability, competitiveness and orderly functioning of financial instruments markets, promoting confidence in these markets and investments in financial instruments, and protection of operators and investors against unfair, abusive and deceptive;
>
> • promoting the stability of the insurance sector and rights holders;
>
> • ensuring the effective functioning of the private pension system and protecting the interests of participants and beneficiaries."

6. **While this mission statement serves to communicate ASF's purpose to its external clients and subjects, a strategy and vision to guide its institutional reform will be needed.** This is particularly important to ensure that management and staff of the institution orient their thinking and approach to regulation and supervision to the upcoming needs, both in terms of European and international practice as well as in terms of assuring that the Romanian financial markets develop unimpeded albeit with appropriate safeguards. In this context, it is recommended that ASF's strategy and vision (supporting its mission statement) be oriented towards:

> *The detection and mitigation of risks in the sectors overseen via effective but simplified regulation using strategic supervisory tactics, thus promoting market development and depth in a sound manner.*

B. Institutional Structural Elements

7. **Certain Norms and Parameters on Organizational Structure still require serious consideration.** This report will cover in detail some of the organizational recommendations for reform in each of the sectors overseen, as well as the support functions. The report notes that the recent advice by the Price Waterhouse Coopers (PWC) firm to consolidate organizational structures contained many good proposals for streamlining the organization, reducing management levels, consolidating functions and units, and centralizing particular functions of institution-wide value. Nevertheless this report notes that in the resultant structure (which is still undergoing marginal changes periodically and thus a final "reform baseline" was not set in stone) there remain several units ("Services") which have overly low staff counts to qualify as real management units.

[1] Unofficial translation from ASF's mission statement on its official website.

8. **While the Board has considered that a five person minimum should allow a unit to qualify as a Service Unit, there still appear to be many Services Units with very few staff.** Some Units have two staff, including the Head. Even a threshold of five persons as a minimum per Unit still appears overly small and hardly suitable for a substantive management job. Such a small size is also less credible as an operating unit in the face of the general public and supervised entities. *It is thus recommended that Service Units constitute at least 10 staff per Unit.* This would imply a similar adjustment to Directorates, many of which administer a staff count on the order of 15 plus or minus. *In this context of expanding the minimum size of Service Units, a Directorate should thus constitute a Unit of at least 40 staff.* This would be a desirable benchmark with some variations allowed. This would affect the new structure proposed, but streamline it in a way that would reduce bureaucracy both within and between Service Units and Directorates, and reflect a flatter, more nimble and easier to understand organization.

9. **The consolidation of Units and Directorates as recommended, provides ASF the opportunity to have a flatter organization and based on expert centers rather than administrative groupings.** The further horizontal flattening of the organization can still rely on key experienced persons. Many of these gained managerial status previously due to prior experience and expertise. *They can remain in key positions but instead of formal management jobs they should be assigned as leaders of key teams within a Unit and possibly receive titles such as Lead Expert or Program Leader depending on their relative strengths.* These individuals would be given roles by their Directorate or Unit Heads to lead and coordinate teams or key functions or programs. This arrangement would also reduce "formality barriers" of communication between erstwhile Units. In sum, if ASF is downsizing generally, maintaining small units and Directorates of limited scope creates unnecessary complexity when the same functions can be achieved via the mechanisms described above.

10. **The above observation on staff counts per Unit implies additional consolidation across function which would also lead to improved fungibility and interchangeability of staff.** This report will note in this context that over time, some functions in the ASF (e.g., licensing of new institutions) have decreased in some sectors due to industries and markets having settled down, and thus the staff count in such Units might better serve the institution if such staff could also be deployed, for example, toward supervision functions, when needed. While these issues are discussed later in the report, they reflect a need for an institution currently with very small units to be more flexible within a flatter structure, to be able to decrease or increase staff in certain functions in line with emerging institutional needs and strategies.

C. Guiding Policies and Principles for Governance, Management and Staff Culture

11. **Besides structural organizational changes, policy and business practices, and information technology reforms, ASF should instill in its institution a set of key principles to guide Board, Management and Staff behavior and ethics.** These represent as set of internal institutional actions that will assist focusing on the business needs and procedure requiring reform in order to implement ASF's new strategy and vision. The guiding principles to adopt include:

- Independence: ASF should be operationally independent from commercial and political influences in the exercise of its functions and powers.
- Accountability: ASF is accountable to the government, regulated entities and the market though the ASF mandate and objectives.
- Transparency: ASF should publicize the internal processes it adopts to reach decisions, including its enforcement procedures, budgeting; and to practice disclosure and sharing.
- Integrity: internal processes that ASF adopts to ensure there is discipline and consistency in its operations, and to limit the risk of management or staff acting in their own self interests as opposed to those of the ASF and the market. Includes conflict of interest procedures, confidentiality, code of ethics and staff codes of conduct.
- Collegiality of decision-making and recusal from pressing for direct unilateral interests; ensuring consistent approaches across sectors.
- Implementing a unified supervisory (and regulatory) approach.
- Delegation of responsibility and decisions to the functional level (empower staff at the working level).
- Increasing visibility, consultation and dialogue with the financial industry and the general public as measures of accountability.
- Procedures, processes and regulations to be simplified, streamlined, being aligned with EU Directives and international standards and principles.
- Modernization requires the support of an adequate, skilled human resource capacity.
- Supervisory tools to be optimized to ensure markets function prudentially and competitively but are vigorous, efficient and free of undue restrictions.
- Activities to be driven by ASF's business objectives and enunciated key performance indicators reflecting its updated strategy.

12. **In relation to Governance matters, certain Board issues on its structure and procedures should be considered.** While progress was made in the recent past by reducing board membership from 21 to nine, the current figure still remains high by institutional and corporate standards. The board could still be reduced by two members to seven to be more effective and less cumbersome, and allow more in-depth dialogue. As well, the existence of both executive and non-executive Board members creates a dichotomy whereby Sectoral VPs by definition have an inside comparative advantage in arguing cases concerning their sectors given their major line management responsibility. This in itself should not count as a large weight of certain individuals in making Board decisions, but it effectively does. The fifth principle listed above (collegiality), should thus be adhered to earnestly to ensure that Board discussion and decisions truly give equal weight to all views. *As well, ASF should consider having a board, with the exception of the President, all made up of non-executive members –*

this would provide more neutrality in board decisions, in particular relating to sector-specific matters.

13. **The separation and delegation of decision making should be clarified to ensure that ASF has checks and balances, as well as efficient decision making.** It appears that many decisions are channeled up to the Board when line managers and senior specialists might be qualified to make them. It is understood that for the moment the Board has undertaken to review decisions on proposed supervisory actions and sanctions affecting subject entities with a view to evaluating whether ASF over-sanctions entities. However, in the long run, a clearer policy on decision actions by the Board, the President (defining top executive powers), heads of Directorates, Service Unit managers, and key staff, should be defined with more delegated functions to reduce gridlock in the institution and concentrate on major sectoral risk issues or corporate policy. In other words, the Board function should be that of policy making, ensuring implementation of policy and deciding on major events/issues, but not day-to-day operational issues. The above assumes that Heads of Department and Deputy Heads of various Units will not be in the new organizational structure as per the PWC recommendations.

II. SECURITIES MARKETS – REGULATION AND SUPERVISION

A. The Regulatory Framework

14. **Although largely in line with EU directives, the regulatory framework is overly complex and regulations can be streamlined to support market development.** The complex regulatory framework places an onerous regulatory burden on market participants given the level of development of the market. Some of the larger issues are highlighted in this section in the two paragraphs below, although the list is not comprehensive. *The regulatory framework should be comprehensively streamlined, according to international best practice (and limit national discretion within the EU directives framework), and a work plan proposed to do so.*

15. **The IPOs and SPOs of SOEs have highlighted areas in which the issuance framework can be simplified and improved.** A succession of procedural improvements in the listing process has been achieved during successive IPOs of SOEs. Many of the improvements required technical solutions or waivers on a case-by-case basis to address regulatory constraints. A review of the issuance regulation is necessary to broadly implement these fixes and allow improvements for future IPOs for both public and private companies to address the following issues:

a. Companies cannot acquire other companies that are more than 33% state owned.
b. The state cannot increase the share capital of companies they own by participation in cash.
c. Inflexible legislation and a complex process regarding the selection of intermediaries.

d. Accelerated book building is not included as a method of IPO.
e. Timing of an IPO is longer than the standard in international markets. Parts of the Corporate Law impact the time to issuance, such as a need to reduce the period under company law, for an increase of capital. Prospectus approval cannot be obtained until the decision of the issuer's annual general meeting is published, and the term for opportunity has passed (which can take up to one month).
f. No electronic submission is used and there is a plethora of documents.
g. No specific chapter exists regarding the risks an issuer has to assume while EU directives require that issuers take full responsibility for an IPO prospectus. Romanian regulations require that the intermediary should also take responsibility for the prospectus, and this precludes large bulge bracket US banks from participating in IPOs.
h. Issues around allocation rights need to be clarified.
i. Corporate bond issuance uses the equity issuance framework. This includes the requirement that for public offerings, the book has to be kept open for five days, with the price set two days before closing. This was changed for equity offerings but has remained in place for corporate bonds. This exposes issuers to volatility, and investors wait until the price is set before subscribing. The result is that many bonds are issued via private placement instead.

16. *It is recommended therefore to streamline issuance regulations and procedures in line with international standards, and to allow* improvements *for future equity and corporate bond listings for both public and private companies.*

17. **A number of obstacles exist for foreign investors to access and trade in the Romanian capital markets.** The key focus of the eight barriers report is to reduce the many onerous administrative costs in terms of time and money that deter foreign investment in the Romanian capital markets. *Account opening regulations should be simplified to meet international practice.* The obstacles include:

a. Complicated account opening procedures that result in lengthy delays and which require the provision of detailed personal information by senior executives, such as a passport.
b. The requirement to appoint a fiscal advisor in Romania.
c. A cumbersome process for exercising voting rights and to receive dividends, that varies between companies.

18. **In an attempt to address some of the obstacles hindering the market, a group including the BSE, MoPF, FSA, NBR, Fondul Proprietatea, brokers, pension funds, and lawyers have developed a capital markets plan.** The plan lists eight barriers to capital market development and the goal of the measures is to upgrade the BSE from Frontier status to Emerging Market status. Many of the measures recommended by the 8 Barriers Group are within the purview of the FSA (i.e., regulatory issues) but others will require a broader government action (e.g., from the fiscal authorities). However, these measures are technical short and medium term measures, and not all encompassing. The removal of the 8 Barriers is a necessary and long overdue first step towards modernizing the regulatory framework for the

capital markets. However, a broader revision of the regulatory framework is necessary. *The 8 Barriers should be implemented in the short term prior to a full revision of the regulatory framework of the Capital Markets.*

19. **The Regulations Directorate's business architecture and process review has highlighted the need for a number of improvements.** Some of these highlight the approach taken to developing the regulatory framework as well as other work undertaken by the department:

a. The Regulations Directorate is undertaking no annual work planning or forward planning. This is a particular concern given the streamlining necessary for the regulatory framework. The department is instead reactive, responding to externally driven requests, either from the EU or the market. *It should undertake a work planning exercise (minimum yearly) with a view of setting the direction for major regulatory changes.*
b. The Directorate does not undertake an impact assessment of its regulations. Instead, it is assessed by the number of acts produced each year. *It should assess the impact of regulatory acts based on the objectives of ASF, which may include financial stability, market development and consumer protection.*
c. The directorate has no project management approach/tools (milestones, resource management, risk monitoring). *It should thus implement a project management approach.*
d. The hierarchy of regulatory tools does not support transparency and flexibility of the regulatory framework. Some important elements are lacking such as FAQs and best practice examples (i.e., primary regulation -> secondary regulation -> interpretation -> FAQs, best practices). This contributes to complexity of regulations in the area. *ASF should clarify and elaborate the hierarchy of regulatory tools to introduce a more transparent regulatory system supporting legal certainty.*
e. A record keeping/data management system is required. Current draft regulation industry comments and feedback are filed in hardcopy within the department, making it difficult for other departments to access. *It should thus implement a documents management system.*

20. **The Regulation Directorate conducts limited internal and external consultations when drafting regulation.** Public consultation in particular, is an important aspect of the principle of accountability of the regulator to the regulated community and the market. The Regulation Directorate should be required to consult all stakeholders prior to the promulgation of regulations and rules, or guidance. Some of the issues are listed below:

a. Internal Consultation is lacking: The directorate and the regulatory entity takes a siloed approach to the drafting of capital market regulation, with little consultation or coordination occurring between sectors on the many areas that would benefit from a combined regulatory approach such as fit and proper requirements.
b. The directorate lacks adequate consultation with technical specialists in the capital markets area. Technical specialists' views are sought during the research stage prior to

the drafting of regulation, however their first opportunity to review the first draft of the regulation is when it is placed on the ASF website and opened up for public consultation. At that stage it is very late for them to address practical and principal concerns regarding the regulation. *Draft regulations should thus also include an assessment of their impact and cost.*

c. External consultation is problematic, and has been cited as a major grievance by the industry and market operators. There is little focus on delivering outwards to stakeholders, i.e., market participants through public consultation, and there is no substantive consultative process with the market particularly with regards to major regulatory reforms. There is a lack of forewarning of new initiatives and the posting of draft regulation on the website is usually done without warning, requiring market participants to closely monitor the ASF website.

d. There are short consultation periods (typically just above the 10 days required by law) that do not provide sufficient time for the market to consider and comment on the proposals. In the case of important changes to regulatory standards, there should be an opportunity for a discussion of the policy objectives of the reforms, preferably on the basis of a published discussion paper or workshop with industry. There is no feedback provided on public comments on regulation, and ASF tabulates responses to public comments received for internal purposes but does not provide feedback. Once comments have been received, it is important for the authority to demonstrate that it has received, understood and considered the comments. One way is to issue a response to the comments.

e. There is no clear procedure for requesting clarification or interpretation of regulation from the ASF. Replies to requests for clarification often comprise a quote of the regulation on which the interpretation was asked, with no further clarification. *In sum, ASF should review and reform the internal and external consultation process.*

B. Authorization and Supervision of Regulated Entities

21. **ASF has complex rules and regulations for the Capital Markets, but market failures indicate deficiencies in supervision and enforcement resulting from the regulation.** Overall concerns include a focus on checking of indicators and rule based compliance. Instead, the focus should be on understanding the risks to the market and regulated entities. .

22. **There are approximately 40 broker/dealer intermediaries with some high broker concentrations in the market, and a large number of weak intermediaries.** Many small local brokers are not profitable – the bottom 20% of brokers make up 2% of turnover. Brokerage houses are active in the secondary market but only a handful has IPO expertise and the skills to lead IPOs. Despite all brokers having back-office systems, many do not have a separation of sales, trading and back office functions.

23. **In late 2013, Harinvest, a small broker, failed to settle client trades involving structured products listed on the BSE.** Prior to the failure, the broker accounted for 25%

of the volumes in the structured trade market, a dramatic increase from before. Harinvest then sold the securities of other clients to cover its settlement obligations without authorization from those clients. These clients and others suffered financial losses. The brokerage had been barred from trading on the BSE by the exchange for a period of time (for failing to pay BSE fees) and the BSE sent a warning to ASF as early and June 2013.

24. **The ASF Intermediary supervision unit failed to detect misconduct through its supervisory activities, despite the warnings of suspicions of misconduct from the BSE.** The Harinvest case illustrated a number of failures of intermediary supervision including: a lack of attention to BSE warnings; a reliance on broker supervision reports and no cross check with transaction and volume data; a lack of timely and accurate reporting of client accounts from the CSD; and deficiencies in the systems, rules and processes of the BSE and CSD.

25. **Intermediary supervision is currently focused on financial reporting and capital adequacy checks, which fail to capture the most important risk activities of intermediaries.** The key risks in particularly are operational (including conduct), governance and internal processes. On-site inspection occurs every two years and the focus is on firms with the largest market share versus the smaller brokers with insufficient internal processes and separation of functions. Thus, a risk based supervision approach should be implemented which concentrates on in-depth analysis of transaction reporting data.

26. **Market surveillance should require intermediaries to submit monthly reports covering their order books, client positions, actual transactions on the exchange, OTC transactions, and overseas transactions.** This data should be analyzed using automatic queries and algorithms. *Extensive coordination is required between Market Surveillance and Intermediary supervision (who will look at governance, internal processes) and consumer protection (who will send a summary of complaints) to determine a risk rating per intermediary.* This data analysis would allow the investigation of a broader range of misconduct activities of intermediaries in a cost effective manner (e.g., churning).

27. **The in-house, combined IT system (trading and post trade settlement) of the CSD and BSE is introducing risks.** The risks include:

a. Key-person risk (sole expertise) for the in-house system; lack of post-trade transparency; combined trading and settlement accounts that introduce operational risks; and a blurring of responsibilities, e.g., who verifies which parts of the transaction chain.
b. The Global account (omnibus account) was introduced to address the challenges of the trading and settlement platform, and align the account structure at market level. However, market infrastructure still presents challenges for foreign investors and intermediaries despite the creation of Global Accounts.
c. The system currently will not meet EU Target 2 Securities requirements. The CSD system is not compatible with international clearing mechanisms such as Euroclear and Clearstream and this deters foreigners from purchasing corporate bonds listed on the

stock exchange. EU regulation requires the standardization of corporate action processes through the CSD. Currently Romanian companies handle corporate actions at their own discretion with direct payment from the issuer, and this will require a change in the market infrastructure.

d. CSD rules and processes are imposing limits on the efficient functioning of the market, e.g., securities lending and borrowing transactions are not practical and cannot handle collateral management.
e. Certain aspects of the Harinvest case point to deficiencies in CSD Rules and procedures. Changes in the systems, rules and processes of the CSD require ASF approval.
f. The Romanian Capital Markets do not have a central counterparty clearing house (CCP) and this exposes the market to systemic risks through derivative trading. BSE has requested that the CCP be housed in the central bank (NBR). This proposal is under discussion. Sibiu has entered into an agreement with the Hellenic Exchanges SA group to provide a CCP, however, this has not been implemented. The EU has imposed a deadline for CCP approval of September 2014. *To ensure better tracking, identification of risks, and reconciliation, it is recommended to separate the trading system and the post-trade settlement system, and implement a CCP.*

28. **Supervision of Market Operators is focused on financial reporting.** An on-site inspection of the operators occurs once every three years (or thematically as needed). In 2013, an on-site inspection was done of the two exchanges (BSE and Sibiu) and the two CSD clearing systems. There is a requirement for ASF to authorize every change regarding internal rules of settlement and trading systems. The regulatory department will analyze the requests and ask for the input of the supervision department. The regulation department has final authorization on CSD rules and procedures, authorization of a new system, and approval of CCP.

a. Regarding trading and clearing systems, operators are obligated to test their IT systems and report annually to ASF about deficiencies. ASF takes a hands-off approach to the systems of market operators, and delegates responsibility for the IT audit to an approved audit company. *ASF should more proactively consider risks imposed by the trading and settlement systems in the market, with a view to addressing them by having ASF conduct the IT audit.*
b. The Harinvest failure points out key deficiencies in the supervisory and enforcement process. The on-site inspection in 2013 failed to pick up any weaknesses in the CSD system, as did the approval of the Regulatory Directorate regarding CSD rules and procedures. Some concerns that should have been identified include: the CSD relied on the statement by intermediaries regarding verification of a client trade; and disagreement regarding who was responsible for verification (CSD or BSE). *Onsite inspection should include cross checking of processes against rules and procedures, and verification of separation of roles.*
c. After the failure of Harinvest, a thematic on-site inspection of the CSD was done in January 2014. ASF made recommendations in February to the CSD to harmonize its internal rules and coordinate with the BSE, particularly with regard to sell-out procedures.

The CSD reviewed their internal rules and code and submitted them for the approval of the Regulatory Directorate in April. The Supervision and Controls Directorates (i) do not know at this time whether this has been approved (ii) have plans for a follow-up inspection and (iii) have not imposed a timetable internally, or for the CSD, to implement the changes necessary to reduce this critical risk for the market. They are relying on the entity to implement the measures. *ASF should implement and communicate clear timetables for the resolution of problems, consistent with the risk and follow up to ensure compliance with such actions.*

29. **ESMA has launched an infringement procedure against Romania, as RASDAQ has not yet been classified as either a regulated market or an alternative market according to EU directives.** The directive requires that all qualifying markets be given the status of regulated market (with a clear legal regime) or an alternative market. Investors would prefer that RASDAQ be classified as a regulated market, as they have low thresholds for investing in alternative markets. However, if classified as a regulated market many RASDAQ listed companies would fail to meet capital and profitability requirements, and would either have to meet the requirements or delist. As a solution has not been found, ASF has passed the decision on the classification of RASDAQ to Parliament. It is therefore recommended that ASF *Classify RASDAQ either as a regulated market or as an alternative trading system to establish what are ASF's supervisory responsibilities over RASDAQ. An alternative would be to mandate issuers to move to either the BSE or an alternative trading system (ATS).*

30. **Regarding the licensing of issuers, the current arrangement is that ASF receives an initial draft of a prospectus, checks the draft, sends it to the BSE for its approval, and the prospectus is returned with BSE approval whence the document enters a ASF multi-layered approval process.** There is no concept of approval of the issuer within ASF, only approval of the prospectus. *This process can be reduced by having only one entity (ASF or BSE) lead the approval process, while allowing the other to remit comments. The authority for approval should be delegated to the Head of Directorate.*

31. **Although the listing rules of the BSE stipulate a required 25% free float, the actual free float is considerably lower as SOEs typically list between 10-15%.** The secondary issuance process should be used to gradually increase the number of shares listed on the BSE, and to increase the free float of SOEs to the regulatory minimum requirement. *ASF should ensure that free float requirements are adhered to.*

32. **As well, ongoing supervision of the issuers, including statutory and periodic market reports, are currently in** separate **sections.** *ASF should aggregate the functions that relate to regular and periodic market reports into the one team under supervision.*

33. **On transaction supervision the existing data base is inadequate for the ASF to discharge its functions fully, and there is only one person who understands the data base and can interrogate it.** There is no meaningful information exchange between the

persons responsible for electronic surveillance and those for intermediary supervision. There many of consumer complaints and issues in the RASDAQ market. Notwithstanding this, there is no electronic surveillance of this market. There is concern regarding the capacity to value, authorize and supervise more complex products and transactions, e.g., covered bonds, derivatives, structured notes. *ASF should implement a database with simple querying tools and should also develop a framework to measure and analyze complex products (which can be used throughout the sector).*

34. **Finally, there is no coordination with the pension supervisors on requirements for AMCs and UCITS supervision versus those of Pillar 3 pension funds that may be similar.** There is some coordination with the pensions Authorization department as requirements are similar and entity can be active in both areas.

III. THE INSURANCE SECTOR – REGULATION AND SUPERVISION

A. State of the Insurance Sector

35. **The most pressing issue facing the insurance sector and ASF is the financial position of four insurers that currently appear to be insolvent, the most serious being Astra Insurance.** The dire financial position of these insurers was caused by predatory pricing in the provision of motor vehicle insurance and the under-reserving for losses. The fact that the issues were allowed to go on for some time undetected and unresolved points to wholesale supervisory failure on several levels as elaborated below.

B. Vulnerabilities and Gaps in the Supervision Function

36. **A proper offsite analysis of the information provided by the insurers should have given the supervisor (at the** time **the CSA) early indications of problems in the entities.** One problem is that separate persons or teams perform different parts of the offsite analysis of insurers (for example one person is dedicated to looking at reinsurance only). This results in no one person having a complete and comprehensive analysis of the entity after it has reported. *Changing the structure and making one person responsible for the analysis of a given insurer as a whole entity rather than dissecting it into various components, should address this.*

37. **The issues in supervising the insurance entities also raised concerns about the efficacy of the offsite function even if one person had performed it in its entirety.** Offsite supervision should be performed both longitudinally (across long time periods) and across the industry. A proper analysis would have captured a number of indicators of current or emerging problems. From a static and point in time analysis, the indicators would be the relationship between the evolution of the gross written premium compared with the evolution of the loss ratios and the evolution of reserves.

38. **For example, reserves for losses that were not growing consistently with the increase in premium income was a pointer towards the possibility of under-reserving.** From a longitudinal perspective, excess growth in premium income is an indicator that the company is buying market share via predatory pricing. A comparison of the performance of the company against others in the industry should also have raised warning signs such as to why was the premium income growing at a faster rate than others in the industry, why was the ratio between loss reserves and premiums lower in the company than the rest of the industry, and why was the loss ratio for the company lower than the industry as a whole.

39. **At a minimum, these observations should have alerted the offsite analysis to make further enquiries and reviews that would have discovered the issues.** *It is thus recommended that ASF revise its off-site program to ensure that analysts are actually analyzing the results and the underlying meaning of changes, as distinct from merely making observations, and that offsite work is performed both across time and across the industry.*

C. The On-Site Supervision Process

40. **The issues in these cases also point to the efficacy of the on-site processes.** A critical input into the information gathering for an on-site examination, is the data that has been provided by the entity to the supervisor over time. Notwithstanding the fact that the internal on-site review does not appear to have been performed properly, the on-site analysts should have accessed the data and conducted some additional analysis.

41. **The failure of the on-site process also points to the need to adopt a more risk-focused approach.** Under this approach a major risk to the insurer is that is does not price its products properly, given the uncertainty surrounding the probability and amount of future claims payments. The premium price is based on a component of insurance risk (i.e., the probability and amount of future payments), the acquisition costs (such as commissions paid to agents), administration costs, and a margin for the return on capital for the insurer. *Under a risk-based approach, the onsite supervisors would ensure that the insurer had such a methodology, that the methodology was sound and could clearly be reviewed by the supervisor, and that the insurer was following the methodology by reviewing some of its outputs.* Relying purely on the market to set a premium is insufficient. A move towards a more risk-based approach to supervision moving forward is therefore strongly recommended.

D. Early Warning Indicators

42. **During the process of deterioration of the entities in question, a number of consumer complaints relating firstly to the administration of motor insurance and secondly to the four companies concerned, were lodged.** The number and frequency of complaints over the last few periods should have resulted in an in-depth thematic <u>on-site inspection</u> that focused on the pricing, marketing strategy and loss reserving for this product. *Accordingly, it is recommended that there is a formal liaison process put in place between the onsite inspection staff and the staff handling complaints* so that (a) a large volume of

complaints is a trigger for a targeted inspection and (b) the number and type of complaints received by the ASF is routinely incorporated into the information gathered before an on-site inspection is commenced.

43. **Industry participants and the Insurance Association had stressed the number of times that** members **raised concerns with the CSA (the previous supervisor).** The ASF should recognize the importance of "market intelligence" as a vital input into its performing its function, and ensure that senior management of the authority are in regular contact with the senior management of the industry and that any intelligence of consequence gathered is acted upon swiftly. The industry is hopeful that the merged regulator will increase its focus on its role in market development, particularly in two areas: health insurance and compliance with mandatory insurance.

E. Other Insurance Products and Issues

44. **With regard to health insurance, participants noted that the country ranks 69th in the** world, **in the provision of health services insurance.** They attributed the country ranking to the embedded attitude of the population from past times where health services were provided free of charge. It was reported that the government had been discussing health reform for over ten years but nothing had eventuated. The cost of health services provided by the government continues to escalate and it the view that a co-payment is inevitable. Consequently, the industry sees an opportunity for private health insurance in the future but needs an insurance "champion" to make progress with the discussions. It is suggested that ASF in the medium term commence a liaison with other national authorities to establish what regulatory impediments exist to having a health insurance market, and to work with the authorities to remove them.

45. **On the catastrophe insurance side of the market, the level of compliance with the mandatory earthquake insurance is low after the scheme being in place for a number of years.** The compliance function is a function of local government authorities and the authorities have shown a reluctance to address matters of non-compliance. It is suggested that the ASF, in its market development role, commence working with local authorities on programs to raise the level of compliance as uncovered seismic risks could have significant impacts on fiscal resources.

46. **As a separate issue, it was noted that the policyholders guarantee fund is an administrative unit within ASF.** Typically such guarantee funds (also applying to the other sectors) as capitalized by the industry operate as a legally independent trust entity. The guarantee fund needn't reside in a separate location and can still operate in ASF's quarters but it should operate with a separate independent legal personality since it manages in trust, the funds contributed by the industry. *The manager of the guarantee fund would thus operate the fund as an independent legal account* and if ASF required usage of the fund it would provide its operator with the regulatory evidence allowing the triggering of disbursements from the fund.

F. Summary of Main Reform Areas

47. **The industry expressed some concerns about the approach to the supervision function by ASF, on three levels.** First, it was noted that there was no continuity in the inspection staff between control visits and this resulted in the companies having to repeat much of the information given to predecessor officers. Second, they expressed some concerns about the level of technical skills of officers sent to undertake the inspections and in some cases had to provide training for them. They were also concerned about the ability of the supervisory staff to make the transition to Solvency II.

48. **Finally, they expressed the view that the focus of supervision was more on compliance and issuing sanctions than understanding the risks in the market and the entities that they were inspecting.** *It is recommended that during the current changes being implemented by the ASF, the issue of continuity be addressed by assigning the supervision of particular entities to one team for a fixed period*; that ASF put in place formal training programs for its staff based on confirming understanding the industry, the extensive changes arising from the implementation of Solvency II, and moving the supervision from a purely compliance to embrace a more risk-based approach.

IV. THE PENSION SECTOR – REGULATION AND SUPERVISION

49. **The Romanian Pension System consists of three pillars, the first of which is managed by the State on a pay-as-you-go basis.** Pillars II and III are privately managed account-based accumulation funds, regulated and supervised by the ASF.

50. **The funds in both pillars have been successful since the introduction of the three-pillar approach in 2007 in terms of safety, but the returns to members have been sub-optimal.** This is due in part to experienced pension fund management companies (PFMCs) under a tight regulatory framework and strong supervision. A significant influence on both the supervisor and the PFMCs is the intermittent suggestions by some members of Parliament to abandon the second and third pillars. This is translated into very inflexible rules and investment portfolios with little or no volatility.

A. Role of the Supervisor

51. **A key function of the Senior Management of ASF should be the ongoing liaison with members of Parliament stressing the role of the private pension market in supplementing and/or** replacing **state-provided pensions that place a significant fiscal burden on the state.** This liaison should focus on the potential costs to the state and the projected replacement rates under the current system, i.e., the ratio between the worker's projected pension and his or her pre-retirement income. This form of analysis needs to be

performed regularly by ASF and widely disseminated to support its statutory role and to support the development of the private pension sector.

52. **The tight regulatory framework and the compliance-based approach taken by the supervisor were justified at the commencement of the private pension system.** But now this should be reviewed to allow the market to develop and to improve returns (and eventual pension income) to members. The current approach needs to be replaced by one that is more risk oriented and this will be discussed in subsequent paragraphs.

53. **The private pension industry is hopeful that the recent merger of the supervisors will bring some economies of scope to the supervisory agency.** As well, the industry expects that the merger will result in some rationalization of the intense supervision of the pension sector, and that it will result in the merged supervisor increasing its focus on its industry development role that is mandated under the law.

B. Costs and Returns to PFMCs

54. **The costs of supervision are high and increasing**. PFMCs report that the cost of supervision is a substantial part of their operating overheads (in one case more than 20% of overheads). The supervision fees increased significantly last year (in one case by more than 55% over the last year) without a corresponding increase in the fees that PFMCs can charge to members.

55. **While all the PFMCs are currently profitable, their margins are being reduced.** The initial investment outlays to establish PFMC's businesses and attract members, were capitalized and are being amortized over a period. The consequence of the squeezed margins is that the point at which the PFMCs have fully recovered their establishment costs has moved out several years. Reducing the regulation and streamlining the supervision of the PFMCs should have a favorable effect on the level of fees that are payable to the supervisor. *In the medium-term, if supervision costs are not addressed, squeezing the PFMCs' margin will result in further PFMCS leaving the market and further concentration of the market that will reduce competition to the detriment of members.*

56. **The fees that PFMCs can charge to members are set by regulation and have not been reviewed for some time.** The fees are calculated as a fixed amount of each contribution and a percentage of the funds under management (an asset management fee). The industry reported that the fixed amount of each contribution does not cover the total administration costs and part of their costs are met from the asset management fees.

57. **In the medium-term, the reforms that are being considered by the ASF should address in part the above issue, however, further actions should be undertaken including:**

- A review of the raft of regulations and reporting requirements that are currently being imposed on the industry, and eliminating those that do not add any value;

- A review of the fee structure for the fees that PFMCs are permitted to charge contributors. PFMCs should be able to recover their costs and earn a reasonable return on capital. If ASF wishes to retain a role in the fee structure of the industry, a more sensible approach would be to limit the activity to addressing PFMCs that are "gouging" or that are earning excessive returns in order to reduce their fees.

C. The Investment Regime and Fees

58. **Fund managers have to pay the cost of acquiring and disposing of investments from their asset management fees.** These fees represent 0.5% of assets under management. This biases fund managers to buy low cost assets such as government bonds at the expense of investments such as equities which are more expensive to purchase. This affects the composition of, and earnings on the portfolio and the returns to contributors. In other words, while setting the asset management fee at a low fixed amount may be rational in the short-term by keeping fees at a low level, it is done at the cost of reduced pensions in the long-term.

59. **The asset management fees should be reviewed within the construct of encouraging PFMCs to adopt more appropriate investment strategies.** If ASF wishes to retain a role in this, a more appropriate way may be to allow PFMCs to recover the costs of a transaction with a small margin for their profit. Alternatively, ASF could consider increasing the flat fee from members' salary contributions and allowing PFMCs to recover only the transaction costs.

60. **The capital guarantee in the Romanian regulations discourages PFMCs from introducing volatility in their investment portfolios.** Allowing some investment volatility would permit higher returns to workers. The need to provide for any shortfall between the aggregate value of a contributor's nominal contributions (less costs) and the value of his or her units in the fund, motivates PFMCs to invest very conservatively in assets with extremely low volatility and correspondingly low returns, in order to preserve PFMCs' own capital.

61. **The consequences of the capital or absolute return guarantee are that the investment portfolios are sub-optimal that this in the end translates into lower pensions for retirees at the end of their working lives.** It is timely to consider the costs (lower benefits for retirees) and benefits (minimizing the risk that the value of a person's units falls below the net value of his or her contributions) of the absolute guarantee in the Romanian private pension system, and seek to strike a balance. If ASF forms the view that the costs outweigh the benefits, it should seriously consider removing the guarantee.

62. **Any initiative to adjust the absolute return guarantee and introduce more volatility into investment portfolios needs to be accompanied by financial education.**

This applies for contributors, the press and politicians, focusing on the fact that more short term volatility may result in occasional negative returns but will provide higher pension returns in the long-term.

63. **The relative return guarantee of returns is also a problem.** This relative guarantee under which the returns of each PFMC must be within a tolerable limit of the average return of all the PFMCs on the market, motivates PFMCs to adopt very similar investment strategies and effectively to reduce competition in the market. For the reasons outlined above, ASF should review the relative return guarantee against the cost of lower pensions caused by the induced lack of competition in the second pillar. A better way to gauge pension fund performance would be to compare returns against internationally renowned funded pension administrators.

64. **Fund managers are allowed only to hedge foreign exchange (FX) risk.** The supervisor will not permit them to hedge interest rate risk. Pension liabilities are long-term and need to be matched by long-term investments implying a high degree of interest rate risk in the process. The failure to allow interest rate hedging motivates PFMCs to keep the duration of their investment portfolios short, again further lowering returns to workers.

65. **It is customary in most pension systems to prohibit PFMCs from using derivatives such as interest rate swaps for speculative purposes or for leveraging the fund.** However, these types of instruments are generally permissible for hedging exposures, provided that the PFMC can demonstrate the hedging rationale behind such transactions. It is suggested that ASF consider allowing PFMCs to use derivative products to hedge all the risks of the fund, provided that the PFMCs demonstrate that any transactions are for hedging and not speculative purposes.

66. **For pension fund managers, all transactions must be made through a recognized exchange but no over-the-counter (OTC) transactions are allowed.** This limits the ability of PFMCs to buy and sell instruments such as corporate debt that is principally traded via OTC transactions. The general rationale for such a provision is that a recognized market is more liquid and price discovery is transparent. Given the fact that the secondary market for debt securities in Romania is shallow with few trades, ASF should consider broadening the access to corporate debt markets to include OTC transactions for those PFMCs that have the capacity and the systems to mark-to-model for price discovery.

67. **The total overall risk profile of the portfolio is determined on an aggregate risk point basis.** There are, however, inconsistencies in the treatment of various instruments. Under some conditions, due to the rationing of instruments, an equity exposure may have a lower risk rating point than a debt instrument or a deposit in the same institution, despite equity rankings being behind both debt and deposits in the event of an insolvency procedure. ASF needs to review the risk profile regulation and ensure consistency in the treatment of all asset classes across regulatory regime governing investments.

68. **The introduction of life cycle funds is under consideration by the supervisor.** Under this arrangement young contributors would initially be placed in an "aggressive" fund with a high exposure to equities with higher volatility and better returns when they are young, and would be moved to more conservative funds with less equity and volatility as they got closer to retirement. This approach is popular in many countries. The PFMCs in Romania are ambivalent about the concept based on the possible political reaction, given the possibility of occasional negative returns in the aggressive and medium portfolios. Some PFMCs consider that the administrative costs of running three or more funds will further dent their earnings.

69. **The introduction of lifecycle funds would require the ASF to rethink how it would measure the performance of funds.** At present, the measures used are first as absolute returns (i.e., how the pension fund performed on its own) and second, relative (how it performed relative to the market). The performance measures are driven by absolute and relative return guarantees in the law. A different approach would be required with multiple funds under which the supervisor would have to develop a reference portfolio and benchmarks for the tracking of the portfolio returns of each of the sub-funds and measure their individual performance against the benchmark portfolio performance.

70. **In addition, ASF would have to rethink the absolute return guarantee under a multiple funds approach.** The concepts of adding volatility and having an absolute return guarantee are inconsistent with such an approach. If the return guarantee was to be retained it should only apply to the final lifecycle portfolio, which is conservative and with very limited volatility.

D. Reserving

71. **The method for the calculation of technical provisions to support the return guarantees needs to be reviewed, as it appears to be hurting the PFMCs.** The reserves are based on future contributions that PFMCs will receive over the projected lifetime of each member rather than the contributions received to date. The rationale behind the guarantee fund should be reviewed given that the managers are required to over-provide in creating a technical provision, they are tightly supervised, and thus contributions to the guarantee fund may be excessive.

72. **Both the payments to the Guarantee Fund and the need to create technical reserves are charges against the profitability of the PFMCs.** Therefore excessive reserves or an excessively large guarantee fund are not advisable. ASF should review the calculation of the reserving requirement and the contributions to the Guarantee Fund as part of the overall review of the structures of the guarantees provided by PFMCs.

E. Supervision Approach

73. **Supervision functions are highly compliance based and reporting requirements are highly comprehensive.** However, the daily reporting of net asset values of the fund units by both the PFMC and the custodian, appears excessive. In addition, reviewing the existence of investments that are held by a well-capitalized custodian is not necessary. The industry reported that the on-site reviews were very long (taking up to two months, at times three), intrusive, and frequently overlapping with the work performed by the external auditors in areas such as reviewing the accounting records and the returns supplied to ASF. The industry questioned the motivation for conducting extensive compliance checks, and the fact that the supervisor applies financial sanctions and fines for relatively minor compliance infractions.

74. **ASF should consider a gradual transition to a more risk focused review process as described below.** ASF should also review its strategy for imposing monetary sanctions for minor issues, given that such imposition is harming the reputation of the agency in the market. Finally, to modernize its supervisory approach ASF staff in pensions should increase their knowledge and expertise about investment activity and investment portfolio benchmarking.

F. Pillar III issues

75. **The supervisor has specifically prohibited the use of pension calculators.** Such calculations would show members what they could expect to receive in pensions from Pillar 2 and therefore would incentivize them to contribute more to the third pillar.

76. **Pension calculators are a useful tool for financial planning for contributors because they are able to project the possible pension benefits for members under different scenarios.** Such scenarios include changes in the rate of earnings on the contributions and the amount of contributions made per period. The role of ASF includes developing the industry and ensuring that retirees have adequate pensions on retirement and tools for projecting such. Provided that there are appropriate caveats and warnings about future earnings on the funds, there is no reason to prohibit the use of calculators and thus the prohibition should be withdrawn.

77. **The provisions for participating in the third pillar are requiring to "opt in" rather than to "opt out."** This means that the fund manager has to execute a written contract with every member even for those whose only contributions come from the employer not the employee. This is a large disincentive for employers to enroll employees. Experience in other countries has shown that employers are likely to embrace voluntary pension systems only if there are no significant administrative burdens on them. An opt-out arrangement is administratively easier and should be adopted.

78. **All financial statements must be sent to fund members by post mail.** There is limited use of electronic means allowed and this adds substantially to costs. For cost and

administrative ease, it is suggested that the use of electronic communication be exploited to the fullest extent, and contributors be given the option.

79. **Contributions including those only from employers, vest in the members immediately.** This means that the accrued pension benefits are immediately transferable and employers cannot use pillar three pension savings as a retention strategy for employees, even for a couple of years. If pillar three funds are to be fully utilized with the support of employer contributions, it is suggested that a minimum vesting period of two years be applied to assist employers to retain staff by providing pillar three pension benefits that vest later. This is particularly so for contributions that are only provided by the employer.

80. **Some regulatory/supervisory practices are overly strict for immaterial issues.** For example, if a contribution from a member or employer does not match the exact contracted amount even to the decimal, the fund manager is instructed to reject the entire contribution amount rather than refund the overpayment or seek the incremental shortfall. *There appears to be no rationale for this tough requirement and it is suggested that it be removed.*

81. **Total tax incentives that amount to €400 per annum for both employers and employees, are weak.** Employers' tax concessions from outlays include a concession from social security; while employee concessions do not. Tax concessions are a most useful tool to motivate workers and employers to make additional voluntary contributions, which in the end, reduce the potential pension liability of the State. *ASF should have discussions with the Ministry of Finance and the Revenue Authority with the aim of simplifying and increasing the level of tax incentives provided to both employers and employees.*

G. Risk-Based Approaches

82. **It has been suggested earlier in this section of the report that ASF should adopt a more risk-based orientation to its supervision (on and off-site) activities.** Such an approach has a number of advantages including efficiency gains, focusing on the areas that are most important thereby optimizing the use of supervisory resources, and taking a forward looking view. It also ensures that it is the PFMC which is primarily responsible for its business, not the supervisor. The initial cost of the approach requires training of the staff of the supervisor and opening up communication channels for the industry to alert ASF as to what is expected.

83. **There is a relatively standard set of risks that are faced by the pension industry.** These include:

(a) governance risk – this is the risk that the Board and Senior Management of the entity are not fit or proper for the task that they are undertaking,

(b) legal risk – this is the risk that the entity is not aware of its legal obligations or ignores them and incurs legal actions against itself,

(c) operational risk – this is the risk that the business processes fail, e.g., the calculation of net asset values, the issue and completion of investment instructions, the maintenance of member data,

(d) investment risk – this is the risk that the PFMC does not have an investment strategy that is consistent with the profile of its members or if it does have such a strategy it is not measuring its performance against it and taking timely action on deviations from such strategy,

(e) theft risk – this is the risk that the assets of the fund are stolen or misappropriated, and

(f) insurance risk – this risk applies to defined benefit funds and funds in Romania where there are guarantees, and it is the risk that the entity does not have sufficient resources to meet its promises. It will also apply to annuity products once these are developed and used in the market.

84. **On the other side of the coin, the entity manages its risk by having policies, processes and procedures to mitigate any risks.** For example, an entity is expected to manage part of its operational risk by having policies, processes and procedures to secure members' data such as disaster recovery strategies, separation of duties, regular backups, etc. Further, PFMCs manage the risk of theft and fraud by ensuring that all assets of the funds are held by a custodian thereby transferring the risk to the custodian. In addition, the entity has a group of staff to control risk. The primary control is the person undertaking the process, followed by risk management, internal audit, compliance officers and the external auditors. Their concern is the adequacy of the controls that have been put in place and the extent to which the entity is following them. As a last resort, the entity has to hold sufficient capital to absorb any risk events that are undetected or unresolved.

85. For the supervisor, taking a risk-based approach focuses on the abovementioned environment and factors, and the approach should be able to address the following issues:

- Assessing if the entity identified all the risks that are relevant to it.
- Seeing that the supervisor agrees that the risks identified are the main risks.
- Checking if the entity has the policies, processes and procedures to measure, manage and monitor those risks.
- Assessing if such procedures are adequate in the opinion of the supervisor.
- Determining if the entity has the qualified personnel to ensure that staff complies with all the risk management requirements.
- Ensuring that these personnel are performing their proper risk control functions.

- Determining if there is any evidence that any of the risk control functions have failed or are likely to fail; and
- Verifying that the entity has sufficient capital to deal with the possibility that, despite all the controls in place, one or more risk event might occur.

V. TECHNICAL ORGANIZATION OF THE INSTITUTION

86. This section starts off with the assumption that the organizational structure proposed under PWC's recommendations will be adopted with some adjustments, and in this part of this report such structure (though its final form was not concluded at the time of this writing) will be used as the new baseline from which to suggest further recommendations. As well, it is assumed that the final structure will combine the jobs of Head of Department with that of Manager of Directorate since previously both positions essentially oversaw the same staff complement.

A. Supervisory Approach and Organization of Functions

87. **The financial supervisory function in its totality is missing several synergies of analysis and generating inefficiencies.** Beyond the issues of whether the latest updated methodologies are being used or not, the separation of the on-site inspection ('control') function versus the off-site supervision function is detrimental to the organization. This separation results in a loss rather than a gain in information – for example, off-site's supervisors' risk management reports prior to an inspection, don't seem to be used or taken seriously thus rejecting financial analysis information that could potentially be valuable to guide aspects of the inspection. Similarly, the on-site inspectors' findings only reach the off-site unit once the reports are formalized by the board, leaving the off-site units in the dark about any potentially significant developments with which they should update their data. *It is strongly recommended therefore to merge the on and off site supervision functions under the respective sectors.* This will also allow additional fungibility of staff across both functions.

88. **Merging the on-site and off-site functions provides an opportunity for streamlining the organizational structure.** Although on-site (control) functions currently exist for all sectors under one Directorate, *ASF should bring them back to the Sectors by combining on-site and off-site staff* under the sector directorate of off-site supervision or as a stand-alone unit, depending on the staff count as per the parameters discussed above. As mentioned in the introduction to this report, both Service Units and Directorates have rather low numbers of staff and combining the staff per sector for on-site and off-site supervision would result in a staff count well below the 40 recommended as a benchmark for a Directorate.

89. **The on-site (controls) supervision effort appears excessive and focused in large part on non-material issues.** On-site inspections were reported to last between three weeks

up to three months, the latter figure seeming almost extreme. Within this range, the shortest visits appeared to be in the securities areas, the median ones in insurance and the longest ones in pensions. As was noted in the above sections, several of the checks and reviews of on-site inspectors, particularly in the pensions area but not limited to that, appear to deal with may numerical and accounting reconciliation issues and requests for documentation to presumably "prove" that a process exists, but which serve the inspectors/supervisors little in getting ahead of the curve and understanding the subject institution's various risks and probabilities of failure or adverse developments. *In any case, the lengthy inspection periods for institutions of moderate size as in Romania do not reflect good practice. The approach and methodology needs reform with a reorientation to focusing on key issues and institution-specific risks.*

90. **In principle compliance checking needs to be done but this should not be the primary focus of an inspection, especially for verification of immaterial items.** The ASF can conduct compliance checking in many areas (e.g.: asset exposure limits, background document certificates, other) using automated computer checks against norms, or semi-automated document downloads so that many checks can be done off-site. Routine compliance checks should thus become baseline background data for inspections but not the topic of them. The separation of on-site vs. off-site units exacerbates this problem. *Exploring further technology-based automation techniques with more powerful hardware and software applications (as discussed in the next sections) will free up inspectors and supervisors to focus on institutional riskiness issues and market risks that need to be specifically assessed in supervised entities.* This will also allow supervisors and inspectors to devote more time to develop more encompassing categories of early warning indicators that include, but are not limited to data from entities' filings of financial information.

91. **ASF will need to undertake a concerted effort to update and develop its risk monitoring methodologies used in supervision.** While a start would be finalizing already initiated efforts to define a credible risk-rating and ranking system for supervised entities, the object of the work should go beyond setting a new set of metrics. Risk indicators may be evolving over time and not static, otherwise ASF risks going back to a compliance-checking approach. *As well, with the assistance of non-supervisory units (described below) risk assessment methods should also include individual institutional idiosyncratic risks that may not apply to all institutions* (e.g.: for investment firms: the variety of the instruments and the activities they engage in; or an insurance company having a much larger proportion of reinsurance than another or a larger portfolio with catastrophe exposures). *Other areas of methodological review involve ensuring consistent asset valuation rules for portfolios held by supervised entities*, across all supervised sectors, something the current Integrated Supervision Unit (renamed below) may initiate. Since fair value accounting may not be consistently applied in all the three sectors due to variations in applying IFRS, this also is linked with the accounting presentation of such values.

92. **In the medium-term, and to fully integrate ASF as an institution, ASF should consider organizing itself around functional pillars with each sector reporting under a common function.** Such a structure, as used in the Czech financial supervisor (the National

Bank – see next section) is used in other FSAs worldwide represents an organizational structure by function rather than sector. Such a structure would fully integrate ASFs several sectors into common technical practices (e.g., supervision pillar) while still being able to easily communicate with their counterparts in other functional pillars (e.g., licensing). In Romania it is understood that such a structure would require modification of the separate charter laws for the different supervised sectors and thus would not be an immediate reform given the parliamentary approvals needed. Nevertheless, it should be targeted as a medium term objective for ASF once the results of the current short-term reorganization crystallize.

B. Enforcement Regime

93. **There is concern by ASF's top management that the institution's enforcement and sanctions regime has become untenable.** From supervisors' and inspectors' accounts, sanctioning seems to be the only method to ensure supervised entities obey instructions from ASF to rectify non-compliance. It also appears that the number of sanctions issued constitutes a performance metric for supervisors, hence, this incentivizes the issuance of sanctions. However, it is not clear if at all times the "non compliant" issue is significantly material to warrant a fine. In such cases a gradually increasing level of actions from recommendations to orders to corrective actions should be issued before sanctions are considered. ASF should review its internal regulatory framework to ensure that a such a graduated scale of actions comprise legally binding orders requiring a response by the subject entity.

94. **A consultation with the respective industries on this issue would also be welcome as there seems to be a lack of "respect" on both sides**. Hence the recourse to pecuniary sanctions as the main tool with which ASF is "to be heard." However, if these are used for less material issues, the level of respect from the industry will not increase. *Developing a scale of warnings, which if not heeded after attempts at exhorting corrective action, should be set forth and communicated in advance to the industry, while reducing the frequency of applying monetary fines.* This regime should be reformed promptly and the Board should relinquish its sanctions review/approval function as this in itself can also generate institutional bottlenecks.

95. **At the other end of the spectrum the level of sanctions in general, is not sufficient to deter misconduct.** For example for serious market offenses (e.g.: trading customer shares for one's own account, or falsifying investment positions and holdings in any of the sectors) sanctions should be of a meaningful proportion in relation to the entity's capital, and if the market impact is significant, in relation so such effect. However, the levels of monetary fines seem overly low to deter either minor or serious offenses. Therefore, entities are happy to pay for it or continue non-complying behavior knowing that the effect of sanctions on their financial will be minimal. *Thus, the sanctions regime also needs to be reformed in relation to serious offenses to ensure there is a significant threat to prevent market misbehavior, fraudulent reporting, deliberate mismanagement, siphoning of customer funds, or dereliction of duty.*

C. The Licensing Function and Agents Registration

96. **Does ASF's work load justify a specialized dedicated licensing function?** This is particularly so in the pension sector where the main intermediaries (pension management funds) are well established and genuine new licensing activities are scarce. As discussed in the introduction of this report much of the resources of the licensing service units in the pensions and insurance areas seem dedicated to registering product sales agents rather than conducting licensing per se. In the pensions area it was reported that 50,000 agents are licensed with 10,000 being registered per year. Similar issues exist in the insurance sector. These agent registrations reflect just that: registrations; and the sponsoring companies (pension funds, insurance companies) are mainly accountable for their work and qualifications.

97. **The process of agent registration is not one of due diligence but rather just documenting self-registered agents.** As such, the effort expended is mostly of registering these product sales agents which does not seem to add much value to the supervision effort. The process does not address material issues and is very time consuming. *A potential solution is to make the pension fund managers or insurance companies report quarterly on their "agent fleet," and use that as the official information on registered agents.* As well, instead of ASF maintaining a rather low added-value database of registered agents it could deploy this effort toward more substantive work analysis and allow further merging of Unit/Directorates. This would allow a further downsizing of the licensing units and/or redeployment of their staff.

98. **With the exception of the capital markets area, the licensing function in pension and insurance could thus be merged with other directorates.** As discussed above, and given the benchmarks for staff count per unit and directorate, the on-site and off-site supervision staff should work together and be merged in one directorate. *Given the licensing work program in the insurance and pensions areas, it is recommended that these units be merged with their respective regulatory units if the latter is not centralized as per the discussion and chart further below.*

99. **More important to ASF would be to register corporate actions (e.g., change in shareholders) of supervised entities in a central place for all sectors.** This function which could usefully be centralized within the institution in a data collection location is more important than the registration of sales agents discussed above. Since registration of sales agents does not constitute a fit-and-proper review, if absolutely needed, it could also be a parallel function of a corporate actions registry. However, as mentioned above the agent data should be reported by the supervised entities who are anyway accountable for their performance and behavior. *Thus, such function under licensing should be considered for elimination, at least in its current document intensive form.*

100. **The licensing/approval function should also count on a multi-sector committee to review full licensing decisions.** *Representatives of the three sectors should be on such a committee*, a process that will add a more systemic level of views and help ASF to harmonize internal procedures across sectors. As mentioned, pending a decision on the agent registration issue listed above, the licensing experts could reside within the new combined supervision directorate and work as a committee for licensing of entities from the three sectors.

D. The Research Function

101. ***Market Analysis & Studies.*** Typically financial supervisory institutions have substantial Departments for applying research to the analytical, macroprudential and risk management aspects of the sectors covered. The ASF has a tiny such unit and much of its work is used by the current Integrated Supervision area which conducts additional analyses of risk. Thus it is questioned as to why these two units should be separated especially given their very small staffing. This goes back to the metric of 10 staff per service unit as a minimum for classification as a Unit. *It is thus recommended that the Analysis and Studies area constitute part of the renamed Integrated Supervision Directorate (see below).*

102. **Consideration of transferring an Actuarial Unit to Market Analysis & Studies seems out of convenience and to increase the staff count of the Directorate.** However, there is likely very little systemic risk work to be done by the Actuarial unit in terms of modeling needs and these staff will likely continue with the same functions supporting the sectors, as they did before. With 6-7 actuaries in total, it also begs the question as to whether so many actuaries are indeed needed in ASF. While centralization of a specific skill has its merits and synergies and actuarial staff prefer such work versus adding on other supervisory/control functions, adding such other functions and using them for specialized ad hoc actuarial analysis may in fact be beneficial to the institution. Of course centralization of the function while providing sectoral support does help to better integrate the institution and cross boundaries though it is not clear whether the actuarial function will have a significant impact in this context as it is indeed so specialized. *Unless this actuarial unit has a solid analytical work program to address ongoing sectoral risks on a broad basis it might be more practical to have them continue in the units they are with diversified job duties.*

E. Integrated Supervision: Policy and Risk Assessment

103. **The Integrated Supervision area has potential to evolve into an important integrating and policy-setting function.** However it remains awkwardly placed in the organizational structure to have any effective impact. Its name is also misleading and can intimidate sectoral departments. *To have an effective integrating function, the Unit should report directly to the President as a policy-advising Department. A better name in this regard would be: Policy, Risk Assessment, and Standards Directorate.* Besides the Accounting Regulation function being added to this Department, *it is recommended to*

consider rolling the Prudential Regulation functions into this Unit and to give the Unit a policy formulation function.

104. **The above would be consistent with the centralized approach to accounting regulation and allow prudential regulation to be developed across sectors with common standards and using a simplified an effective approach.** Since the main task of ASF is supervision, the regulatory function is technically shared between MoF and ASF thus its placement is less critical than that of core supervision functions. Centralizing this would also help to make all regulations consistent with the EU framework and norms for all sectors and serve as a pilot for functional integration of an area covering all the supervised sectors. If it is decided not to centralize the prudential regulation function ASF should consider holding some (but not all) regulation staff in the Policy, Risk Assessment and Standards Directorate (also see matrix approach discussed below).

105. **The renamed Policy, Risk Assessment, and Standards Directorate would likely need to include other functions such as research and EU affairs.** EU and International issues primarily related to emerging regulatory norms which is why all these functions meld together into a common framework. Promoting a consistent and updated regulatory approach would also influence supervisory processes and actions to incentivize them to migrate towards a more selective risk-based approach. As well, for the risk analysis and research areas (and supporting statistics unit) which already share information closely for related work, should be combined to undertake, inter alia, macroprudential risk analysis and systemic risk analysis and to develop indicators for assessing and ranking entities' risks.

106. **The tables on the next page illustrate organizational structure scenarios based on ASF's latest plans but including some of the options listed immediately above.** In these organizational structure scenarios the first case assumes centralizing prudential regulation while the second one does not. In both cases, the principle of forming Units and Directorates with larger more significant staffing complements is applied.

PROPOSED DIRECTORATES UNDER REVISED STRUCTURE (SERVICE UNITS TO AVERAGE 10 STAFF) ASSUMING PRUDENTIAL REGULATION IS TRANSFERRED TO CENTRAL POLICY/RISK ASSESSMENT UNIT

President	VP Administration	VP Securities	VP Insurance	VP Pensions
Policy, Risk Assessment, and Standards Directorate (*includes Integrated Spvn., Acct. Reg, Research, EU/Inter. Affairs and Prudential Regulation*)	Economic, Financial, Budget, Procurement, Other	On-site and Off-site supervision of Regulated Entities and Electronic Surveillance, market abuse	On-site and Off-site supervision of insurance companies and reinsurers	On-site and Off-site Supervision
	Information Technology	Issuers, Authorizations	Authorization/Approval (companies, reinsurers, brokerages, agents)	Authorization/Approval for PFMCs, agents, and mgmt. of Guarantee Fund
Program Management Office and Public Relations	Human Resources			
Operational Risk, Consumer Protection, AML	Legal Directorate			

Note: In the above table, one of the changes includes merging electronic and transaction surveillance with market intermediaries supervision which seems a closer functional fit than having these in their previous units alongside the Issuer function. Conversely, the intermediaries authorization is thus merged with the Issuer function since both pertain to a type of authorization function.

PROPOSED DIRECTORATES UNDER REVISED STRUCTURE (SERVICE UNITS TO AVERAGE 10 STAFF) ASSUMING PRUDENTIAL REGULATION REMAINS IN THE SECTORAL UNITS

President	VP Administration	VP Securities	VP Insurance	VP Pensions
Policy, Risk Assessment, and Standards Directorate (*includes Integrated Spvn., Acct, Reg, Research, EU/Inter. Affairs and Prudential Regulation*) Program Management Office and Public Relations Operational Risk, Consumer Protection, AML	Economic, Financial, Budget, Procurement, Other Information Technology Human Resources Legal	On-site (control) and off-site supervision of Regulated Entities and Electronic Surveillance, market abuse Issuers, Authorizations, and Regulation	On-site and Off-site supervision of insurance companies and reinsurers Authorization/Approval (companies, reinsurers, brokerages, agents), and Regulation	On-site and Off-site Supervision Authorization/Approval for PFMCs, agents, Regulation, and mgmt. Guarantee Fund

F. The President's Role, Policy-Making Functions, and Support Units

107. **Presently and also included under the institutional reform plans, the several support functions report directly to the President.** Many of these functions have an administrative element to them. *It is proposed to remove most of the support functions from under the President (except the Program Management Office and Public Relations) and to add the new Directorate of Policy, Risk Management, Standards and Quality Department to report directly to the President.* The existing set of support functions do not need direct administration by the President and can be distracting to the President's needed attention to policy and risk issues. As discussed above, the inspections/control function would be removed and place with alongside sectoral supervision Units.

108. **The above implies a possible redundancy in the First VP function as all the previously existing services (except consumer complaints) would move under the President's direct line of management.** The support functions (Economic/budget, HR, IT, Legal, Administration, Procurement, Logistics and other corporate functions) should be placed under a newly created VP for Administration to handle all day-to-day support functions. Thus, the First VP position would be replaced by an Administrative VP allowing the President to focus his role as chairman of the board as well as on key risk issues, new policy making and setting new standards for the institution.

G. The Legal Function

109. **The sectoral functions of the Legal Directorate seem to have a heavy workload though reform in their work content should be examined.** A potential redundant legal process practiced is that of the Directorate *needing to review and approve all supervisory/control orders or actions in line with the legislation.* This function should be a reassessed since it does not seem to add value to the institution. In the meantime, the proposed new organizational structure lumping all sectoral related legal functions in one Unit seems lopsided (in terms of staff count) compared to the other proposed legal units that do not deal with sectoral supervision or litigation issues. This should thus be revisited and rebalanced accordingly. Once freed-up of such work, legal staff could focus on the more meaningful review and drafting or regulatory proposals. Legal staff also indicated that the institution has problems in keeping track of documents in the workflow decision stream thus making them spending inordinate amounts of time chasing documents for review or reference throughout the institution. This indicates the need for modernized document tracking systems for internal consultations as well as external queries (e.g., complaints as per the section below).

H. Matrix Structures for Key Functions to Ensure Collaboration and Efficiency

110. **An important consideration for increasing integration and effectiveness of ASF would be to include virtual units with staff spread across client units.** This is a light form of matrix organization which would assure that *certain specialized functions report to a central manager but work in the location of the client units*. For example, legal staff working on sectors would all work in the legal directorate but 1-2 legal staff per sector would have their office location in one of the sectoral directorates. This would assure efficiency in communications while having the legal personnel still be subject to norms from the legal directorate. The same model could be applied to accounting regulations staff as well as complaints staff. If prudential regulatory staff were centralized, as per above, this model could be used whereby their center of reporting would be in the central unit while some staff would physically work in the sectoral client units. Staffing may be too small in some central units to do this, but in principle this design would greatly assist the institution's integration.

I. Complaints and Consumer Protection

111. **Centralizing consumer protection (consumer complaints) would remove a volume of processing from core supervision and regulation tasks while also serving as a possible early warning indicator.** A key use of complaints statistics should be to serve as an early warning indicator on problems within a given entity. Solving fundamental weaknesses up front may sharply diminish the volume of complaints received. In the interim, the processing of such will need investment in a system of case management with technology automation. As discussed above, if a central complaints unit is created it will still need significant support from the sectoral units so *it would be beneficial to have some complaints unit staff continue to have an office location within the sectoral units (e.g., as part of a merged licensing department).* Having such staff reside in sectoral units to liaise with, but administratively under the centralized complaints manager will ensure both proximity to the client and a consistent approach and standards for processing these.

112. **A missing aspect of the Consumer Protection unit, however, is the primary function implied by its formal name**: that is to develop a meaningful program of financial literacy and consumer protection, for example by assisting in developing norms for entities to publish clear fact sheets on financial products and risks, which are fully understandable to the non specialized public. As well, ASF should clarify the demarcation of its consumer complaints role with that of the agency for consumer protection in order to not take on a larger role than is needed and forward its views to the agency of consumer protection once a case needs to be ruled on.

J. The Human Resource Dimension

113. **Several of the above recommendations require a serious re-casting of staff skills, re-training and a re-hiring program.** Training of staff is required to orient staff in analyzing more idiosyncracies at the entity level of credit, market, operational, liquidity, management, sectoral/macro and third party risks versus the mechanical checking of financials against regulatory norms. These norms, albeit, are meant to stem some such risks but risk-based supervision entails going beyond the general sectoral norms and using expertise to identify individual institutional weaknesses beyond the normative checks.

114. **Staff skills to augment such a risk analysis approach will be needed with the eventual ASF objective to reach regulatory and supervisory simplification, while increasing the focus on risk-based supervision.** A training and upgrading program for staff with potential should be administered in the central HR Unit but the proposed Policy, Risk Assessment and Standards Directorate, being the renamed and expanded Integrated Supervision Directorate would be tasked with developing the content of such training program.

115. **While not specifically an HR issue, to implement all the reforms discussed, a task force and change management team should be considered.** This can be coordinated by the Program Management Office and should be useful to ensure communications are ongoing and clear for both internal and external purposes. It should also be used as a feedback mechanism while the reform is underway. The change process should not drag on and the new design should be announced clearly with all details defined up-front. The task force can assist in implementation issues and as a conduit for dialogue and communication.

116. **One final niche HR issue relates to persons in key very specialized functions.** In the latter part of this report, this is discussed in the context of IT staff. But it applies to other specialized staff such as actuaries. For example, in ASF there is only one actuary at the moment who understands the risk modeling for the pension guarantee fund and pension company reserves. *A back up capability should be established for such functions only understood by one person.* Incentives for such staff to establish back-ups would be to reward them with a lead expert title (and raise) if they succeeded in training 2-3 other ASF staff in the methodologies.

VI. ALTERNATIVE SUPERVISORY STRUCTURES AND THE CASE OF THE CZECH REPUBLIC'S FINANCIAL SUPERVISOR

117. This section illustrates the organization and approach used by the Czech National Bank (CNB) which is the integrated supervisor for securities, banking, insurance and pensions, using

functional-based rather than sectoral-based structure. It also illustrates the corporate culture of CNB and its ongoing active dialogue and interchange with the financial industries it supervises.

118. The CNB approach is based on:

- **A single vision** stemming from the single definition of the supervisory Objectives and related Mission and Policies for supervision, licensing, regulation and enforcement.
- **The organizational structure** supporting transparent and clear division of responsibilities and a unified (but proportionate) approach to supervision.

A. The Single Vision

119. **Objectives.** The Czech National Bank (CNB) exercises its supervisory functions in a way that leads to strengthening of the confidence of market participants (consumers and institutions) in the financial market, in particular:

- by contributing to:
  - the **financial stability** as well as the **development of the market,** and
  - the **protection of financial consumers**;
- by promoting education of the general public in the financial area.

120. **Mission.** The CNB develops a system of financial market supervision that has clear responsibilities and goals. In its supervisory activities, it effectively applies its legal powers, all the while pursuing its main objectives, above all safeguard the stability of the financial system.

121. **Supervisory actions are taken in a timely manner in a form that is appropriate to the situation to which they respond.** When proposing sanctions, the supervisor draws on the full range of options laid down in the legislation. It does its work with respect to the powers of other agencies of the state, with the aim of effectively fulfilling the CNB's mission in the supervisory area.

122. **The Czech National Bank applies its legally defined independence in the area of supervision.** This independence gives it full discretion to take actions towards supervised institutions and other market participants. The CNB takes organizational measures to ensure that supervision is independent of any other activities that might give rise to a conflict of interest with its supervisory function.

123. **In its supervisory work, supervisory staff provides feedback within the institution to ensure that the regulatory framework reflects practical supervisory experience and meets market needs.** To ensure that supervision is transparent to the public and the supervised entities, the Czech National Bank issues reports on supervisory activities and communicates major supervisory actions and selected findings and approaches in a prompt and flexible manner. The CNB Mission is elaborated in the policies that include Supervision Policy, Licensing Policy, Regulation Policy and Enforcement Policy.

B. Supervision policy

124. **The CNB performs supervision that is based on a forward-looking assessment of the risk profile of supervised institutions, proportionate to their systemic importance**. This reflects a risk-based approach to supervision as illustrated further below. This system identifies material risks relating to the supervised entities' activities and quantifies their impact. It also captures systemic risks regarding the behavior of financial market participants.

125. **The CNB determines the intensity of its supervision in particular areas of the financial market and specific institutions on the basis of the outputs of this system.** When performing supervision, the CNB assesses compliance with legal requirements in the areas of prudential rules and conduct of business rules. These two areas are supervised in a mutually consistent manner, connecting the links between them. The CNB has a system of regular reporting by supervised institutions and their consolidated groups. The reports defined by the CNB contain both financial and non-financial data. The reporting system reflects a need for exercising supervisory powers effectively in a timely manner, capturing all important risks.

126. **The CNB communicates relevant findings to supervised entities using both formal and informal communication tools**. The specific form of communication is selected with regard to the need to ensure that effective corrective action is taken and that supervision has a preventive effect. Formal actions or sanctions are only applied after informal tools and communications have failed to take effect in a reasonable period of time. The supervisor undertakes follow-up checks to see that corrective actions have been taken and that the approach chosen by the CNB was effective one. The CNB generalizes selected findings and expectations of its views, and publishes them in the form of official information, and/or replies to frequently asked questions.

C. Regulation Policy

127. **The CNB sets the regulatory framework in line with its long-term vision supporting the financial market development.** In this respect CNB exercises its powers in a consistent holistic manner and via the contribution of a close and on-going dialogue with the key stakeholders (financial industry, financial consumers, central government bodies).

128. **The system of regulation has a transparent structure and CNB sets clear and proportionate requirements.** The CNB uses the regulatory framework to promote the market best practices. When introducing a new piece of regulation, the CNB conducts an impact assessment analysis. The CNB provides recipients of the regulation with a clear and consistent interpretation - to ensure unified and meaningful implementation.

129. **As a member of EU institutions, the CNB proactively proposes requirements that reflect specific needs of the local Czech market, having in mind the EU single market's development.** When transposing the EU legislation, the CNB limits the use of national discretion to achieve regulation which can be internationally recognized as adhering to generally accepted standards and not deviating from the spirit and specifics of EU legislation.

D. Licensing Policy

130. **The CNB sets criteria to be met for granting an approval or issuing a license where standards are based on the same principles in all areas of licensing, using a single set of definitions.** These definitions are designed to provide firms with greater clarity about the information CNB needs, to facilitate progress towards authorization as rapidly as possible and crucially, to provide firms with clear milestones along the path to authorization, with the possibility of receiving authorization before they commit major resources to infrastructure investments.

131. **It is essential that the applicant meets basic standards that prevent undue risks to the financial system and to customers.** As long as the basic standards are met, CNB aims to make entry, and subsequent expansion, as easy as possible. A sound balance therefore has to be struck between the risk that new entrant institutions will fail, versus the benefits of easy entry. The licensing process, at a minimum, consists of a thorough assessment of the organization's ownership structure, directors and senior management, its operating plan and internal controls, and its projected financial condition, including its capital base.

132. **To help achieve a high level of consistency and objectivity, the licensing process is supported by the Licensing Committee (consisting of internal experts) from various sectors.** The committee delivers its independent view for the first instance of the licensing process. The rejection of the application can be appealed. The second instance review is independent of the first instance's processes; and is supported by a team of CNB's lawyers that are independent of the first instance team, and which is advised by the Board's Advisory Committee composed of external experts (academics, lawyers, legislators).

E. Enforcement Policy

133. **The CNB takes a risk-based approach in selecting which cases to pursue for enforcement which includes considering its Objectives and Mission.** The CNB considers carefully what course of action would be a proportionate response; and exercises a common standard of fairness in the use of its powers. The CNB is selective in the cases investigates. Its considerations include whether:

- The misconduct poses a significant risk to the Objectives;
- The misconduct is serious in nature;
- There is evidence or risk of disrupting the financial market stability;
- There is evidence or risk of market abuse;
- There is actual or potential consumer loss or detriment;
- It is a CNB priority to raise standards in that sector, or with respect to that issue.

134. **The CNB's approach is to achieve credible deterrence in respect of its legal mandate.** The CNB focuses on cases where it can make a difference to consumers and markets, using enforcement strategically as a tool to change behavior in the financial services industry. The CNB has a range of sanctions available and it uses these sanctions selectively to deliver strong, visible enforcement outcomes.

135. **To help achieve consistency and fairness in decision-making, all enforcement cases are subject to two-instances in the decision-making process.** The first instance's decision can be appealed. The second instance's review of the matter is independent of the first instance's process. It is supported by a team of CNB's attorney's that are independent of the case team, and advised by the Board's Advisory Committee composed by external experts (academics, lawyers, legislators).

136. **The CNB evaluates the feedback from those involved in the enforcement process.** Publishing the enforcement action along with appropriate supervisory follow up leads other market participants to consider whether the enforcement action has implications for their business, systems and controls. Furthermore, publishing the details of enforcement decisions demonstrates that wrongdoers will be held to account, and helps the industry to understand the types of behavior considered unacceptable. The CNB recognizes a strong need to be clear and selective about what in particular is a matter of its concern.

F. Planning Process

137. **CNB prepares a three-year strategy for each area of its core business.** The Strategies are elaborated in the Annual Plans that stipulate a detailed plan of activities envisaged. These plans are used as a basis for the measurement of performance of CNB Units.

G. Organizational structure

138. **Governance.** The supreme governing body of CNB is the Board of the Czech National Bank. The Board sets monetary policy and the instruments for implementing this policy, and decides upon the fundamental monetary policy measures of the CNB. In the area of supervision it decides on strategic measures and takes decisions in the second instance for licensing and enforcement procedures.

139. **The Board is a collegial body and its individual members do not have direct executive powers.** The Board consists of seven members, comprising the Governor, two Vice-Governors and four other members. The Governor, Vice-Governors and other members are appointed and relieved from office by the President of the Republic.

140. **The members of the Bank Board are appointed for a term of six years but their terms are not parallel and typically follow a two-years sequencing pattern.** No person can be allowed to hold the position of member of the Board more than twice. A Board member may be relieved from office only if he/she no longer fulfills the conditions required for the performance of their duties or if they have been guilty of serious misconduct. A member eligible for appointment may be any citizen of the Czech Republic who:

- Is fully competent to perform legal acts;
- Has completed a university education;
- Is determined to be of integrity;
- Is a person of recognized standing and professional experience in monetary matters or in the area of the financial market.

141. **Executive powers are exercised by Executive Directors who are Heads of Departments.** Each department has no less than 50 staff members. The Department consists of Divisions that have no less than 10 staff members each. CNB's Organizational Chart does not recognize other organizational units but they can be established by the decision of the Executive Director. For Teams, these can be no less than 3 staff members.

142. **The Executive Directors are appointed and can be relieved only by the decision of the Bank Board to whom Executive Directors report.** Executive Directors of the core business report to the Board regarding their activities in written form, on monthly basis. Their

performance is measured against the key performance indicators (KPIs), and their salaries and bonuses are approved by the Bank Board. Each Department has its own budget. The Executive Director decides about the allocation of resources (respecting the General Budgeting Rules). Potential conflicts between Executive Directors can be resolved only by the Bank Board. All these measures support independence of Executive Directors.

H. Organization of Supervision

143. **Supervision is organized so that information flows smoothly and appropriate decisions are taken at every level of governance.** CNB applies measures to avoid conflicts of interest between its supervisory work and the private interests of its staff (Ethical Code is supervised by the Ethics Committee). The CNB provides adequate resources, including material resources, to ensure independent, competent and effective supervision. When allocating its resources, it takes into account systemic supervisory priorities based on the risk profile and systemic importance of supervised institutions.

144. The supervisory activities are performed by three departments:

- Supervision Department;
- Licensing and Enforcement Department;
- Regulation Department.

145. **The original division of the supervisory departments by financial market sectors was replaced in 2008 by a function-based organizational structure.** CNB has been the integrated supervisor of the Czech financial market since April 2006. This set-up has proved fully successful amid the persisting global financial and economic crisis. According to the experience of CNB, it provides following advantages:

- Flexibility in day-to-day communication and decision-making;
- Information-sharing synergies across sectors;
- Coordinated communication with supervised entities, foreign supervisors and other counterparts;
- Stronger position in crisis situations;
- Financial stability monitoring on the level of the whole financial market;
- Ability to analyze the spill-overs of risks across the sectors and their potential impact on economy;
- Sharing expertise and experience across sectors;
- Unification of supervisory tools and techniques;

- Synergies in reporting (a single design process, common formats, a shared database, etc.).

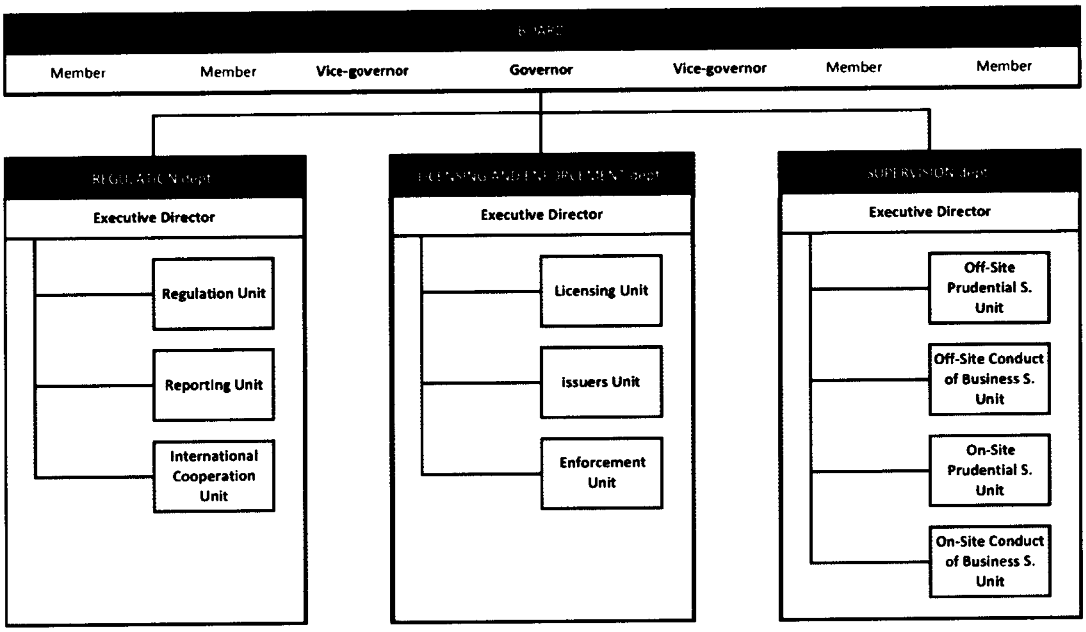
146. **As mentioned, the backbone of supervisory activities is the risk-assessment system.** The uniform and consistent performance of these activities is assured by the Supervision Manuals. They have a modular design and contain a detailed description of supervisory activities to the level of detail of individual operations and applications to specific cases.

147. **The Supervision Manuals set the frequency and outputs of all supervisory activities, responsibilities of staff members involved, input data of supervisory analysis, detailed description of the analysis, and qualitative and quantitative benchmarks for the evaluated areas.** They limit a possibility of individual failure, assure the appropriate treatment of confidential information and establish conditions for maintaining the audit trail of all relevant processes. They also support the system of the KPIs.

148. **Supervision works with set of data stored in one database and in the case of financial statements, Supervision's Dashboard/Early Warning System (the set of predefined indicators) is applied to analyze incoming data.** Some of the data is shared with the Monetary Policy Department (respecting Chinese wall policies). Individual staff members can customize the system by adding their own indicators. Other data is analyzed using either predefined alerts and algorithms (typically transactions data) or individual queries (typically the Credit Registry Database). Specialized IT tools support banks' and insurance companies' stress test exercises or quantitative actuarial assessments. Prudential regulation pillar 2 processes (ICAAP/ORSA) are integrated into the risk-assessment system.

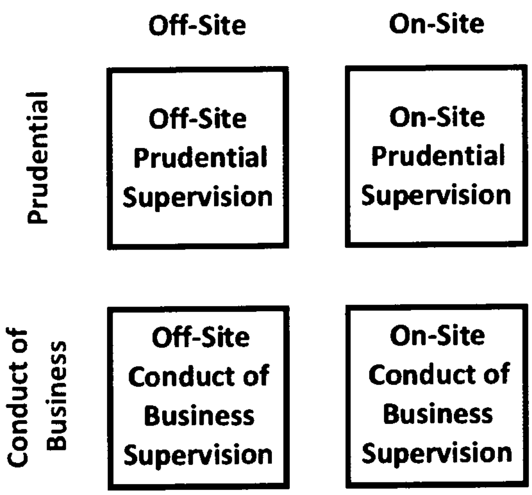
149. **All documents and signatures are processed electronically.** As a public institution, CNB has the obligation to communicate electronically with all entities other than natural persons. All of them have automatically established e-mail boxes in the Czech Post Office's IT system and use electronically signed documents.

I. The CNB Organizational Chart



Note: Each Department includes Units covering specialists from all the main sectors.

J. The Design of the Supervision Department Organization

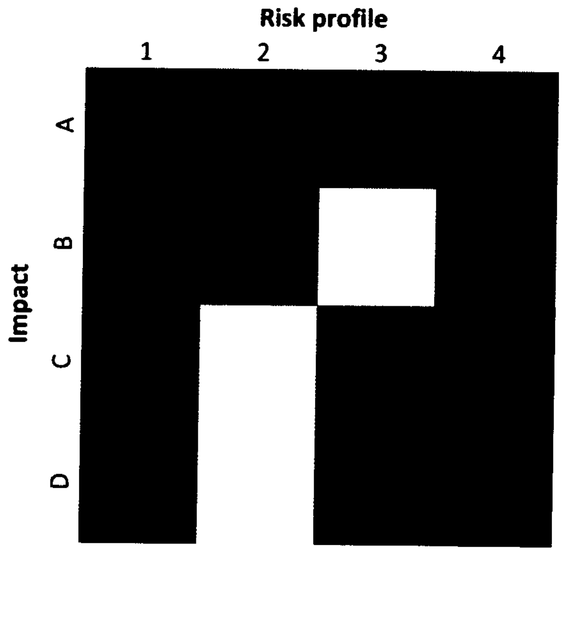


K. The Risk-Based Approach

150. **The Risk-based supervision system is designed to assess a risk profile of the supervised entity and an impact of its potential failure.** A risk profile reflects the level of credit, market, operational and liquidity risks (risk exposure), and the process of managing and mitigating these risks (the risk management and control system). A simplified example of the format is illustrated below:

Risk Category	Risk Exposure				Risk management and control system				Risk Category Score	Overall risk score	
	Risk Indicator	Rating	Weight	Rating	Area	Rating	Weight	Rating		Weight	Score
Credit Risk	Average rating of bonds	1	15%	2	Quality of management	1	15%	2	2	20%	2
	Qualitative assessment of credit risk	2	20%		Quality of IT systems	2	20%				
	...	..	..		...	..	..				
...	...	..	..	...	...	..	..	...	...	...	
	...	..	..		...	..	..				
	...	..	..		...	..	..				

151. The risk profile is assessed alongside the impact of a potential failure of the institution and they are captured by a heat map (below), which helps to prioritize supervisory activities.



VII. BUSINESS ARCHITECTURE

152. **The business architecture review analyzes how an organization functions and identifies opportunities for realizing quality and efficiency gains.** Business architecture represents the "blueprint" for how an organization operates. It describes the networks through which authority, information, and work flows within the organization. This first part of this section elaborates on the current challenges with the existing business architecture. The second part describes the target architecture and the recommendations relating to organization, process and technology improvements.

153. **The findings presented below represent the collective functional enhancements needed to create a target state for the ASF involving more standardized, simplified, and, over time, automated processes, allowing to better leverage the use of ASF human, technical, and financial resources to achieve the Authority's goals.** The findings are described below in the following sections:

- Governance/Decision-Making
- Organization Structure and Culture
- Core Functions
- Support Functions
- Information Technologies

A. Current State Assessment: Governance/Decision-Making

154. **There is a need to define ASF's Strategy to guide its activities.** It is understood that the new Strategy will be established once the reorganization is completed. This step is essential to guide the activities of the organization in the new structure. The performance metrics needs to be developed to link ASF's objectives to its program execution. ASF's Strategy will strengthen its ability to direct its activities and limited resources to the priority areas that have the greatest value and impact.

155. **The decision making process is cumbersome and involves multiple levels of approval.** The Legal Department is consulted in most of the steps in ASF's business processes. Approvals are escalated starting with the Unit Head all the way through the Board level. For example, in provisioning licenses for entities in the Pension sector, multiple signatures from senior management are required for routine operational tasks such as authorizing the establishment of the entity, change in the Board members, changes in capital, and changes in ROF. Vice-Presidents are signing-off for around 30 documents, the President around 50 documents, and the Board around 50 documents for all type of entities associated with the issuance of licenses.

156. **Staff at the working level are not empowered to make decisions.** Given that existing multiple approval processes described earlier, staff at ASF spend most of their time "chasing signatures". To ensure timely response to ASF stakeholders, decision making authority should be delegated at the functional level with the appropriate controls in place.

B. Current State Assessment: Organizational Structure and Culture

157. **There is limited collaboration across sectors and across functions within a sector.** For example, the Capital Markets Supervision unit does not get a chance to comment on draft regulation until it is placed on the ASF website for public consultation. Only the Board Inspection Note and findings (accompanying the final report of the on-site inspection) is shared consistently with the off-site supervision team (e.g. pension).

158. **There is limited communication to ASF Staff.** ASF staff members are not adequately informed or have limited access to information on developments in ASF. Given that this is a transition period, constant communication to staff is essential to help with change management.

159. **Specialized skills and related activities are spread across the organization.** Currently, statistical and legal staff (who provide legal advice to sectors) are now centralized and provide support to the other functional areas in the organization. This model allows specialized services to be leveraged across business areas. At the same time, it provides staff career enrichment opportunities to work in multiple areas and further enhance their skills. Other potential areas for consolidation should be considered, including Accounting and Regulatory support.

C. Current State Assessment: Core Functions

160. **Responsibilities for supervision are diffused among several groups.** Currently, the on-site supervision function is performed by the Control department that is separate from the sectorial supervision departments responsible for off-site review. This creates a limited flow of information across departments and to senior management.

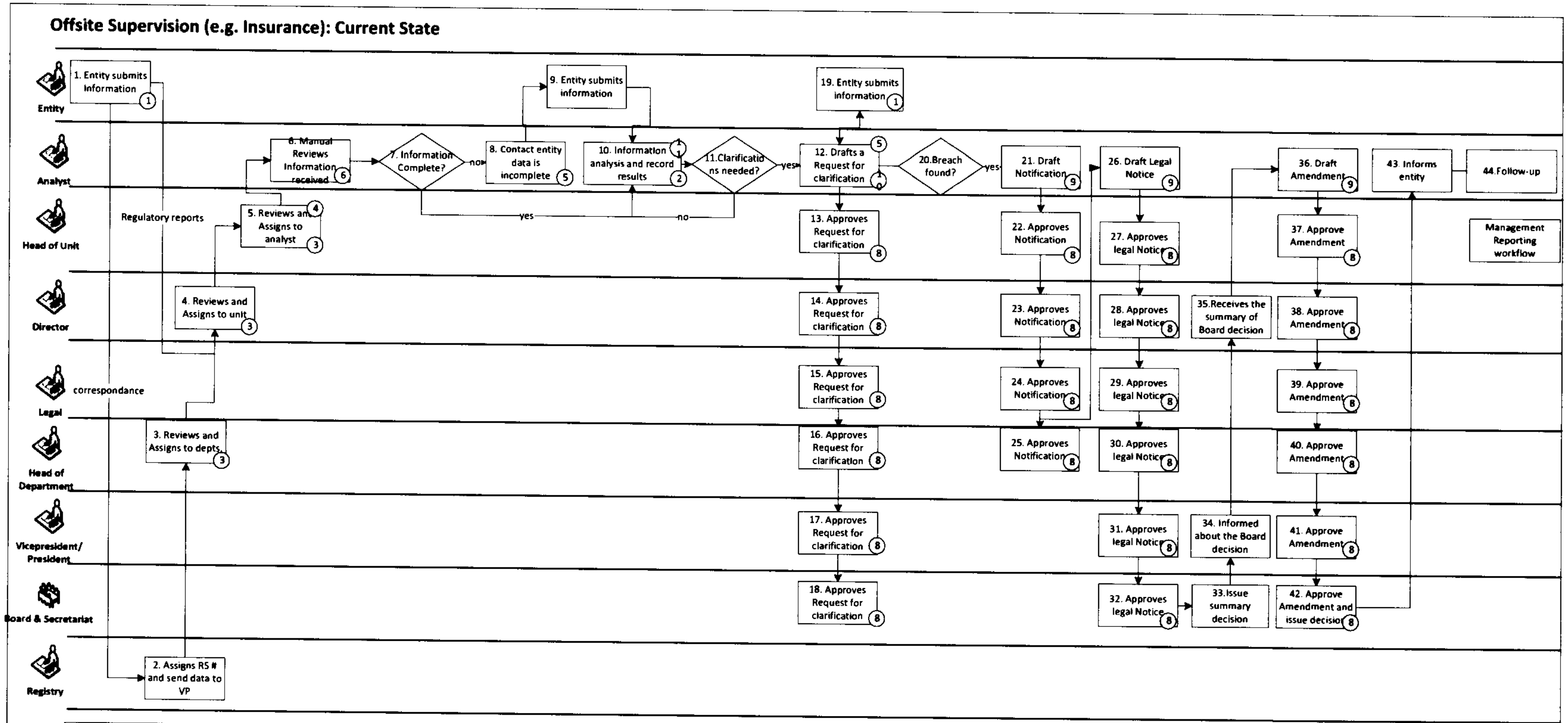
161. **The processes involved in ASF's core functions, such as supervision, consumer complaints and regulations are different at the detailed level.** However, based on the workshop conducted, there are a lot of similarities between the business processes across the sectors. For example, at the aggregate level, both the onsite and off-site supervision processes across the sectors generally follow the same workflow from Information Gathering, Information Analysis to Enforcement and Reporting. Similarly, the issuance of regulations, norms or internal procedures generally follows a similar process and can be standardized. Further, handling consumer complaints across sectors can have common workflows that could be standardized. Annually, ASF receives a large number of complaints, with the insurance industry

having the largest number. Although these complaints are handled by the Complaints units across the three sectors and will have a different response time requirements, the processes across these sectors are similar. This also allows for aggregated reporting of information regarding the number and type of complaint that will better allow for risk detection.

162. **ASF's current business processes are comprised of several steps requiring multiple levels of approval and legal reviews.** The example on supervision is illustrated in Figure 1 and Figure 2. Overall, based on a brief analysis, off-site supervision activities for one regulated entity involves around forty four (44) high-level steps (including the enforcement workflow) and around nine (9) "actors". In general, it is estimated that off-site supervision takes around one month to complete, depending on the clarifications needed and the complexity of the entity. For on-site supervision, preliminary analysis indicates around twenty five (25) high-level steps (from when an entity provides comments to the final inspection reports), and around eight (8) actors are required to complete the activity. As indicated earlier, multiple levels of approval by management including the President/Vice-president and/or Board are required for routine operational documents, such as the inspection report, amendment note, and legal notice to the entity. For the reporting activities, given the lack of a central repository of data and reporting tools, an inordinate amount of time is required to collect the data, validate and reconcile across multiple sources and generate the report.

163. **Regulated entities provide data to ASF both in electronic and (mostly) paper format as required by some regulations.** Although a full inventory was not conducted, ASF receives electronically approximately 47 unique file types from 64 regulated entities in the Pension sector, 28 unique file types from over 500 regulated entities in the Insurance sector and 223 unique file types from over 250 regulated entities in the Capital Markets sector (See Figure 3). Despite all the information collected, it is not clear how all these information are being analyzed to support the functions and mandate of ASF.

Figure 1: Off Site Supervision Current Processes (Draft)



Notes

1. Data submitted in paper and electronically
2. No worksheets
3. Multi-levels review of entity information until it gets to the analyst
4. Analyst assigned by function (e.g. financial, corporate governance) not entity
5. Follow-up with entity through mail not electronically
6. Manual checks on data quality
7. No visual reporting tools
8. Multi-level approval processes
9. Multiple documentation is not best practice
10. Board has to approve any notice for clarification for it to be legally binded
11. Lack of authoritative data source

Figure 2: Onsite Supervision Current Processes (Draft)

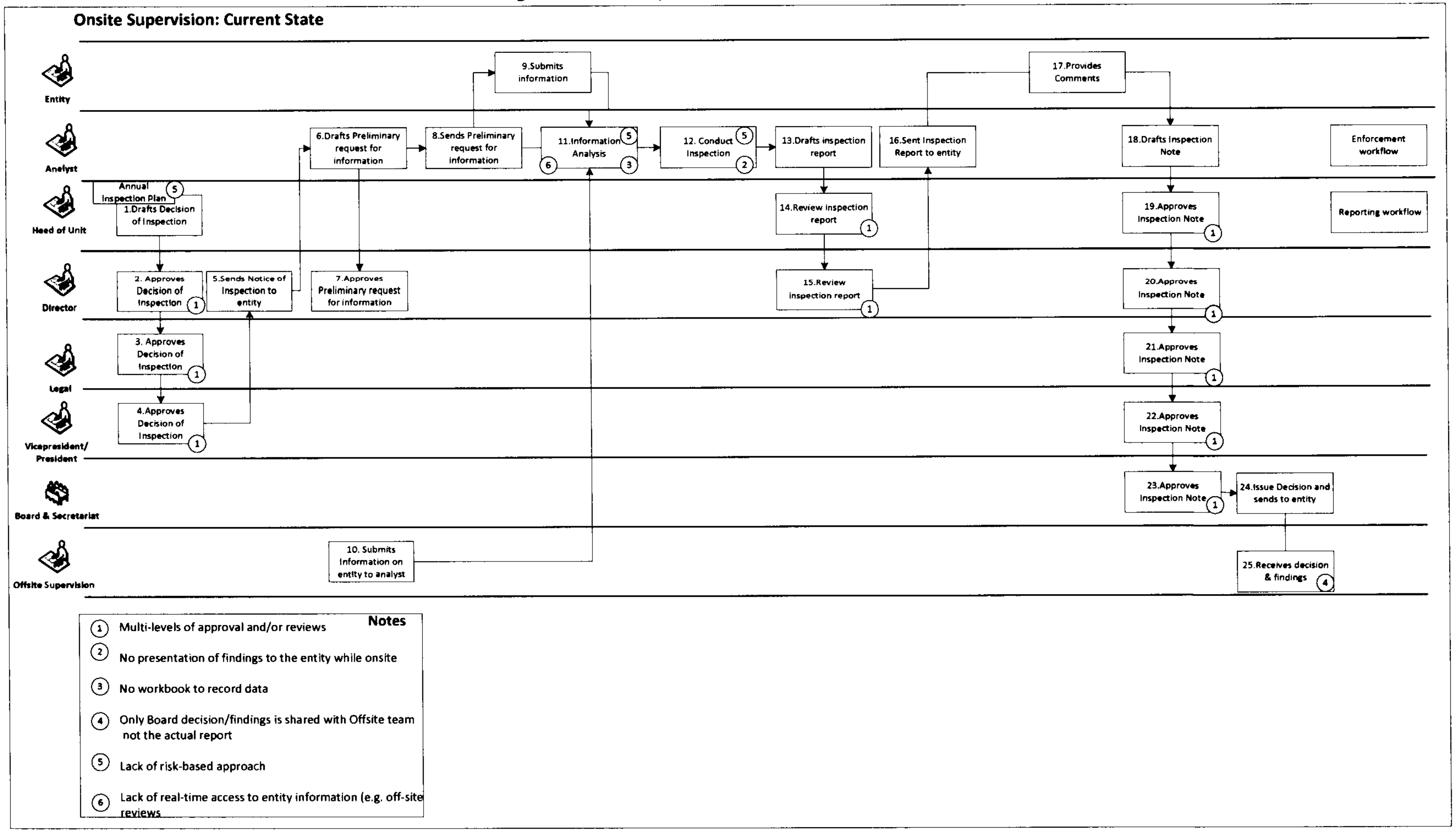
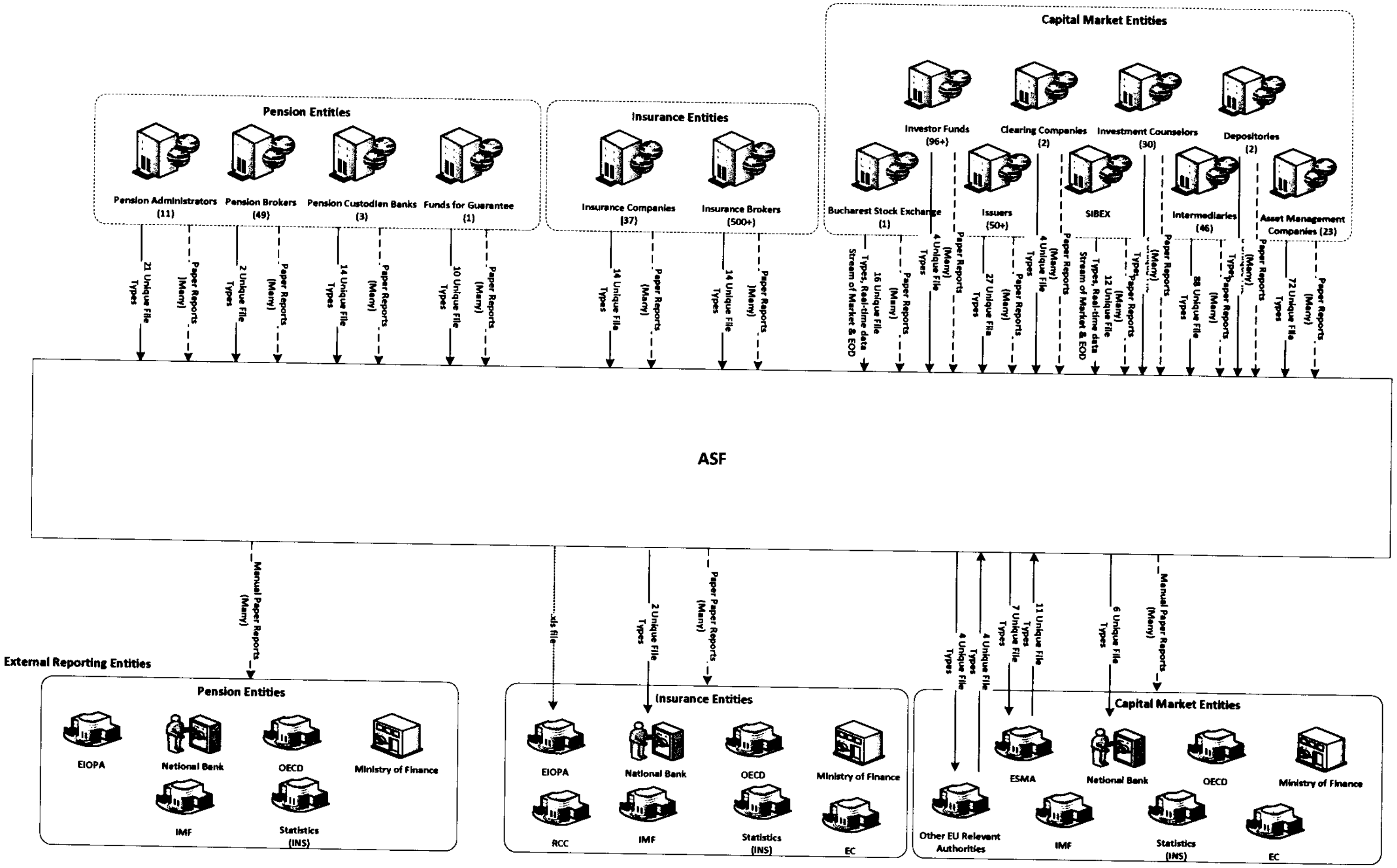


Figure 3: ASF External Information Flows



KEY

File Interface — Digital file transfers can occur annually, semi-annually, monthly, daily and real-time

Paper — Paper reports can occur annually, semi-annually, monthly, daily and real-time

.xls file sent via email

164. **ASF's core functions are conducted manually without the benefit of automated tracking, notification and auditing capabilities.** The workflow within ASF is done manually, with "staff waiting at the corridors" to get signatures required to move the process to the next step. Department heads are reliant on individuals to provide them updates on the status of the units various activities. Department heads have no easy way to keep track of the status of the reviews. Stakeholders communicating with the Agency do not have an easy way to keep track on the status of their inquiries.

165. **Data is not shared across ASF.** Currently, data and information collected is only available to the unit responsible for the data collection. For example, documents/information submitted by regulated entities are only available within the competent function (onsite supervision, offsite supervision, complaints) as opposed to a centralized repository. Staff would have to contact their colleagues if they need information on an entity. Outgoing formal communication from ASF is also delivered on paper, assigned a number and linked to a registered file. Again, this document is only available within the competent function. Thus, easy access to information is hampered by the lack of a central database that supports all the regulated markets. With existing practices, ASF staff is precluded from having an integrated view of an entity across different functions or events.

166. **Analytical functions at ASF seems to be limited.** Currently, basic reports created mostly in Excel worksheets are provided to Management to measure the activities of the organization. Most of these measures are primarily basic input/output measures such as the number of consumer complaints received and processed, the number of inspections, etc.. Regulating the industries under its purview essentially is limited to "checking off boxes", rather than, for example, conducting a robust economic analysis on impacts to the regulated markets. As ASF shifts from rules based supervision to risk-based supervision, analytical capabilities are critical to support the new operating model. This will also require the requisite technology support to analyze potentially large volumes of data to detect patterns, trends, and anomalies in the regulated markets.

167. **Documents and records management standards and processes are limited**. The units and processes in ASF currently address the archiving aspects of paper documentation (Archives unit) and classified national security information (Confidential Information Units). However, this function needs to be extended to the management of electronic documents. Electronic documents, like paper documents, must be managed to protect its confidentiality and integrity. Electronic documents, like paper documents, has a lifecycle and needs to be managed starting from the acquisition, creation, review, updates and retention/disposition.

D. Current State Assessment: Support Functions

168. **While the Human Resources, Financial Management and Administrative functions are supported by several specialized systems and excel spreadsheets, there is a need to integrate these systems to ensure operational planning and management controls.** Data from ASF's payroll system is manually being entered into the accounting system. Expenditure requests are being entered into one system to verify budget availability, and then subsequently entered to another system to commit the expense (assuming budget availability). Many of the processes supporting the administrative function are still manual and paper-based, requiring multiple levels of approvals within ASF. The HR department maintains personnel records on paper and much time is spent in accessing and retrieving data for decision making. Further, ASF's revenue management system is deemed to be limited and needs major improvements. Overall, development of annual plans (e.g., procurement, budget planning, staff planning, etc.) are labor intensive given the lack of system integration across the various worksheets and stand-alone systems.

169. **The HR department is currently undertaking the development of a skill-based competency framework for management staff positions.** This framework will be applied to all staff positions in the next phase. As such, it is critical that the staff accountabilities and responsibilities are defined and be supported by the appropriate competency framework.

170. **A review of ASF's procurement processes especially in the area of Direct Purchases needs to be undertaken**. Substantial numbers of expenditures are conducted through Direct Purchasing even for capital assets (e.g., computers. equipment). By pooling these expenditures and establishing alternative procurement methods, it is possible to realize cost savings. Further, additional saving may also be realized by reducing the transaction costs of managing and controlling these direct purchases.

171. **Key person/function risk exists in Payroll.** Currently, the Payroll system is internally managed within the Payroll Department. The computer hosting the Payroll system and data is physically located in the Payroll Office. Although access to the system is limited, management controls of this highly critical system need further attention.

172. **The communication function is limited, only covering both media relations and internal communications.** Consultations revealed that there is a lack of trust in the institution. ASF needs to actively promote its activities in the market and media. At the moment, there is no overall communications plan that is aligned with the priorities of ASF.

173. **ASF IT does not meet the Regulatory IT Audit Requirements that ASF (will) impose on its regulated entities.** There are no policies and procedures relating to the management of Information Technologies to ensure information security, privacy, business continuity and

disaster recovery needs. The current IT strategy is focused on technologies. The Strategy has to be revised to align with the overall strategic direction of ASF and needs to address the people and process dimensions of IT operations.

174. **Data/Information Management function does not exist in ASF.** All business processes in ASF involve the acquisition/creation, review and edits of data/documents. To standardize the management of data in ASF, skilled resources will be required to identify, map, and create the necessary rules and processes to ensure that data are used consistently and accurately across the organization, promoting a single version of truth.

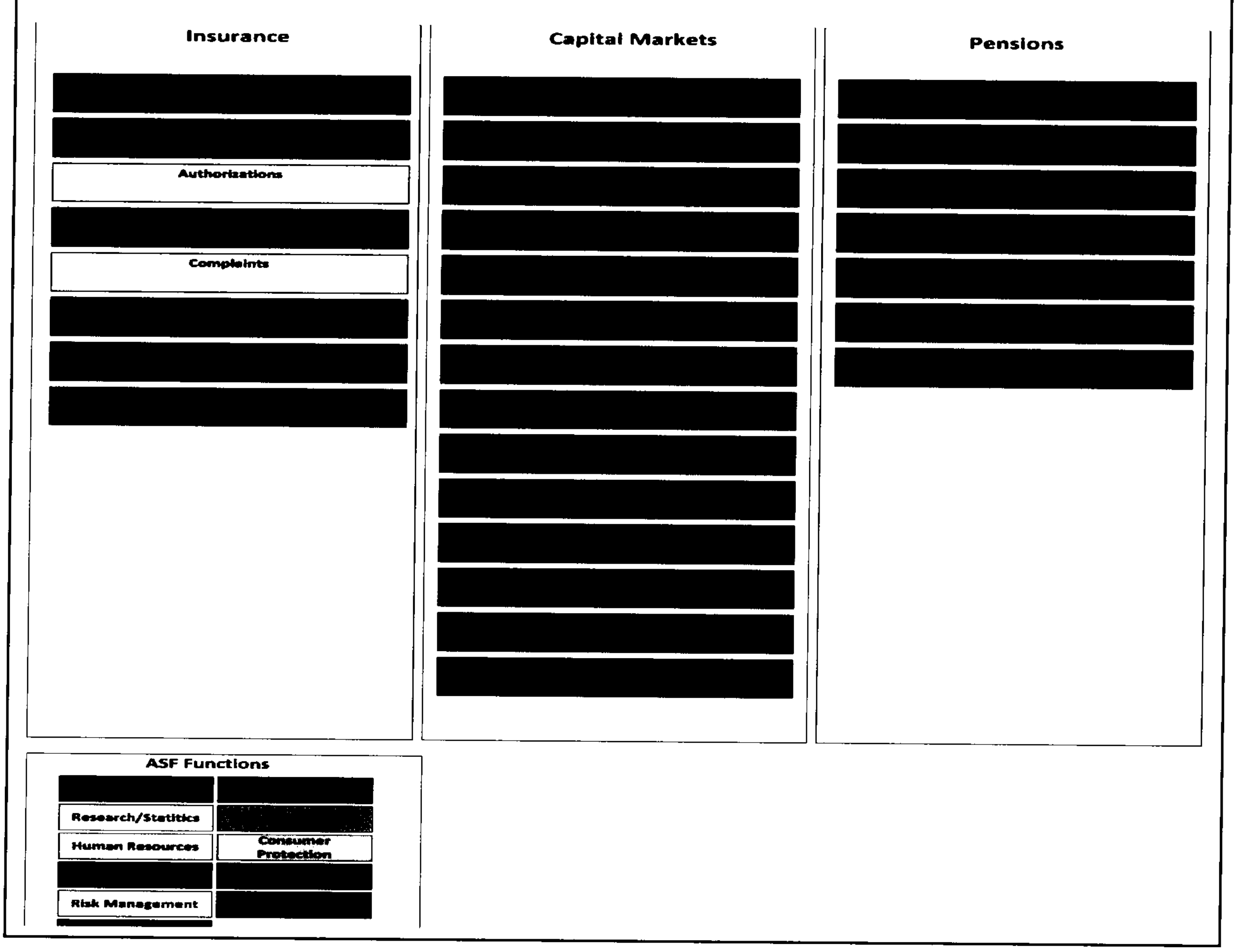
E. Current State Assessment: Information Technology

175. **Multiple systems that are not integrated support the functions of ASF.** Currently, multiple systems exist for each sector, nine (9) for Insurance, thirteen (13) for Capital Markets and seven (7) for Pension (See Figure 4 below and Annex I for detailed information). Most of these systems collect data from the regulated entities through a secure web interface (or client server application for capital markets) and are only available to unit responsible for the function. Each of these systems have their own data repositories, file systems and reporting tools and are not readily accessible to all ASF staff. These systems do no fully support the operations of the sectors. For instance, in the case for capital markets, there is a need for better systems to support data collection from intermediaries.

176. **Licenses for key IT systems are not maintained.** As such, necessary updates to the software are not made. In some cases, ASF does not have the rights to make changes to the software. This creates the situation where critical systems are not properly functioning to support ASF's business processes.

177. **Despite these systems, local office automation tools (Word, Excel) were developed to support ASF business processes.** Numerous excel spreadsheets and word templates are created across the units to keep track of its activities and support Management reporting. For example, consumer complaints are tracked in local spreadsheets. As such, issues are not easily tracked, and the workflow cannot be easily monitored.

Figure 4: IT Systems supporting ASF Business Functions



178. **The Registry System in ASF does not fully support the document management requirements of ASF.** This system is not linked with the execution of the business processes at ASF. It does not manage the lifecycle of electronic documents, from creation and storage, to archiving or destruction of documents.

179. **The Administrative Functions are supported by multiple systems that are not integrated.** Specialized systems (e.g., CIEL for accounting, SINTEC for budget control, PRIMA for Payroll) exist but are not integrated. As such, internal controls are not automated and dependent on manual reviews. Further, an integrated revenue management system must be implemented to manage the fees ASF charges to its regulated entities.

180. **Operational risk exists in IT.** The current IT infrastructure is not properly set up to support business continuity, disaster recovery and information security. ASF lacks the

technologies and operational procedures to protect the privacy and integrity of the information needs to be strengthened given the types of data collected by ASF.

F. Target State Business Architecture

181. **The Target Business Architecture presented in this section of the report is a high level architecture that can be achieved in the medium term.** In developing this target architecture, guiding principles were assumed and applied to the high level analysis conducted in this (abbreviated) business architecture assessment. As such, the target state business architecture described in this section is illustrative and not prescriptive. It needs to be reviewed, revised and re-defined as more detailed information gathering and analysis is conducted.

182. **The (illustrative) Modernized ASF is best described as:**

- ASF is driven by principles (or values).
- ASF is guided by an overall Strategy to achieve its mission with clear goals/objectives and performance metrics.
- ASF promotes a high-performing work environment that attracts and retains a skilled workforce, including leaders who provide strategic direction and motivation.
- ASF encourages a collaborative work environment across functional areas and sectoral disciplines.
- ASF leverages information and technologies to efficiently and effectively support its activities.
- ASF optimizes its limited resources by focusing on activities that yield the greatest value and impact in regulating and supervising the pension, insurance and capital markets, continually improving its operations and ensuring internal controls.

183. **Changes relating to governance, organizational structure and culture, the operating model (i.e., supervisory approaches), accountabilities and information technologies will be required to evolve to the target state.** Therefore the migration to the target state needs to be considered in parallel with a prior legal and regulatory.

184. **The subsequent sections on this report elaborate on the principles and recommendations on evolving towards the illustrative target state architecture.** In terms of sequencing, it is essential that the principles are first articulated and agreed upon at ASF. The principles drive the development of the target architecture. The implementation of the requisite changes should be phased, depending on the overall priority/focus area of action.

185. **The following are the guiding principles used to articulate ASF's illustrative target business architecture:**

- Efficiency, transparency and fair-mindedness in the way a regulatory authority goes about its business enhances its reputation for objectivity, integrity and independence. Activities and processes are managed with transparency and clear accountabilities based on principle of cooperation.
    - ASF is visible and accountable to the general public and business community.
    - Collaboration across functions and sectors is the norm for ASF staff.
    - Staff are empowered to make decisions at the functional level.
- ASF procedures, processes and regulations are standardized (across common functions), simplified, streamlined and in line with EU Directives and international standards and principles.
- ASF attracts and retains adequate, skilled human resource capacity.
- Supervisory tools are optimized to ensure markets function efficiently and competitively and are vigorous, efficient and free of undue restrictions.
- ASF Activities are driven by its Business Strategy and objectives and enunciated by KPIs/metrics.

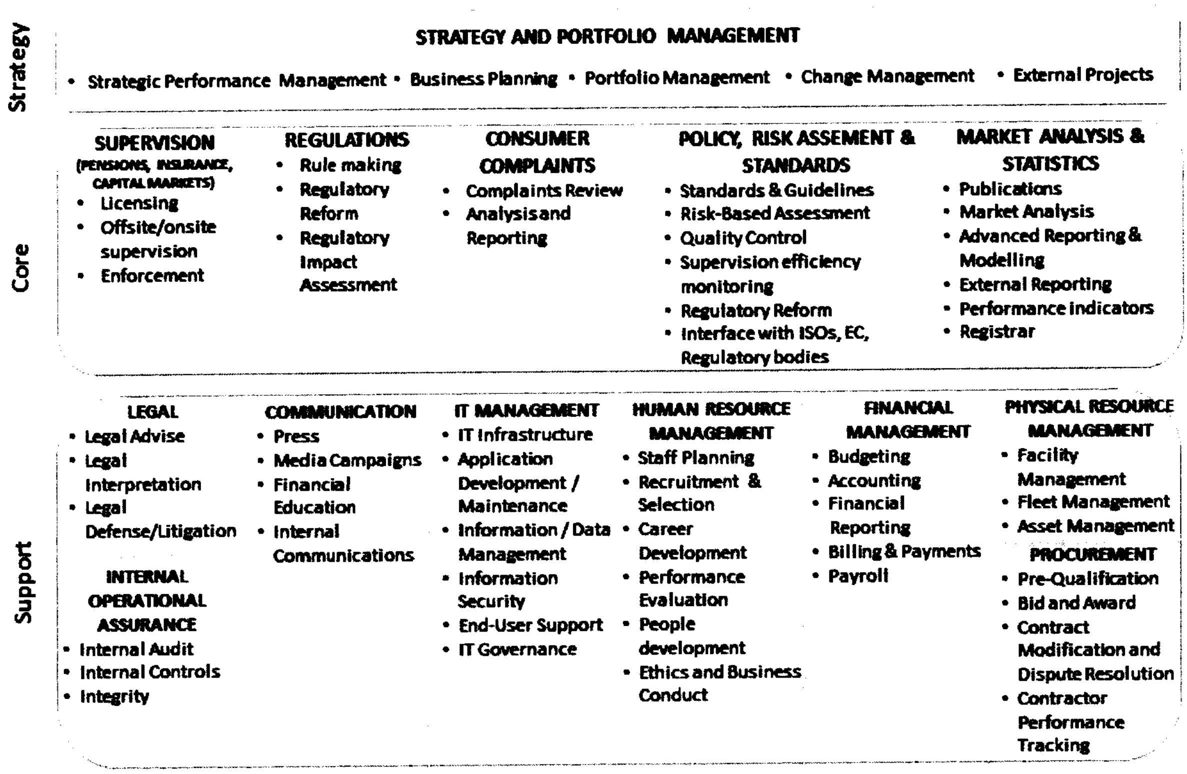
186. **The ASF Target Business Architecture is a functional view (vs. organizational) of the activities that support the execution of ASF's mission.** Common activities are grouped into functions to help identify areas of business process standardization. Business process standardization will:

- improve internal and external transparency,
- enhance operational effectiveness through simplified, and over time, automated organizational processes and procedures,
- align the roles of staff and units to the institutional targets and objectives, and
- provide clear rules for accountability, pushing responsibilities to the lowest operational level.

187. **As shown in figure 5, the target ASF Business Architecture is composed of activities relating to Strategy, Core Functions and Support Functions, regardless of the sector of focus.**

- Strategy. The strategy function sets the strategic direction of ASF in achieving its mission. It identifies the objectives and priority areas of focus. It facilitates the development of the business plans required to achieve its objectives. It monitors ASF's progress in achieving its objectives through key performance indicators.
- Core Functions. Core functions are those activities that directly support the achievement of ASF's mission. Based on the limited functional review, ASF conducts supervision, develops regulations, responds to consumer/stakeholder inquiries/complaints, and conducts market and economic analysis. These core functions are relevant in all of the sectors under ASF's purview. As indicated in the current state assessment, these core functions have not been integrated and are still operating on a sectorial basis.
- Support Functions. Support functions enable the activities of ASF. Unlike the core functions, the support functions are already integrated across all sectors.

Figure 5: Target Business Architecture



188. **At the operational level, the business processes supporting the target ASF Business Architecture are characterized by:**

- Standard processes support the acquisition, creation, review and editing of documents at ASF from data collection to reporting. Overlapping steps, as well as those that do not add any value to the overall outcome, are eliminated (e.g., multiple, redundant reviews and approvals will be reduced while assuring compliance to policies and laws). The standardized processes are event-driven supported by clear business rules.
- Guidelines defining the business rules promote the systematic use of the standardized procedures.
- IT systems support these standard processes by making all activity of ASF units traceable on a computer system.
  - Entity data and documents are electronically submitted and classified based on standard templates and attributes.
  - Any information circulating within the ASF is scanned and classified (tagged) in accordance with predetermined protocols and assigned to an entity file.
  - Entity files are available on a real-time basis to those with access rights.
- Core functions including supervision, consumer complaints and regulation processes are run in accordance with the revised roles and accountabilities as defined in the revised ASF ROF and Operational Procedures.

    - Each step of the process are linked, where applicable, to a standard form used by the operative units to create a uniform style within the institution.
- Each activity of the ASF, including the use of staff resources, is traceable and measurable through these performance indicators. The performance indicators enable Senior Management to verify at any time during the strategy implementation period whether the activities of the institution are on target or need to be refocused.

189. **An illustrative Target State Business Process is illustrated in the next highlighted section.** Using on-site/off-site supervision as an example, the next section describes an integrated on-site/off-site supervision function supported by an empowered Supervisory team, simplified processes, access to consolidated information and automated workflows.

See box on next page

Illustrative Target State: Integrated On-Site and Off-Site Supervision

Common Activities: The future workflow will follow standardized and common business processes that are fully automated across all three sectors:

	Offsite	Onsite
Team Assignment	X	
Inspection Scope		X
Information Gathering	X	X
Information Analysis	X	X
Inspection		X
Enforcement	X	X
Risk Profile	X	X
Reporting	X	X

Team Assignment: In the future state, supervisory teams are assigned to be responsible for both offsite and onsite. Supervisory teams can be responsible for one specific entity, in the case of large complex entities, or be responsible for a portfolio of entities. In both cases, supervisory teams are led by a senior staff member and include a number of specialists. The team's supervisory teams interact directly with members of the entity's management across various business lines and control functions.

(i) Offsite Review

Information Gathering. In the future state scenario, the entity submits information online through automatic file upload (e.g. Excel, XML, XBRL) according to predefined templates. Business rules for automatic data validation are performed by the system which detects exceptions indicating possible data entry errors such as unusual ratios or trends (e.g., capital and type of assets on the balance sheet meets the legal requirements). Documents (electronic or scanned) submitted as attachments are classified by pre-defined attributes (e.g., entity ID, title, date, type of document, author), stored in the document management system and linked to the entity by an entity identifier. The supervisory team is being presented with an electronic history sheet for the entity automatically populated with data from the last five reporting periods. As a basis for their analysis, the supervisory team uses a working sheet with all the areas that need to be reviewed and with all the ratios already calculated. If information is not reported, the supervisory team contacts directly the entity.

Information Analysis. Supervisory team spends now most of its time performing the analysis of the data and documentation submitted. Business rules and calculations provide immediate early warning indicators on submitted data. A quick calculation to compare the current reporting period to the previous one can highlight early warning signs, empowering better decision making. If a breach is found during the analysis (e.g. breach of the minimum capital), supervisory team contacts the entity directly to clarify and/or to arrange for the data to be resubmitted, and archive the results.

Enforcement. If the analysis shows that a breach has occurred, a notification is prepared by supervisory team and approved by the Head of Unit and/or Director on an exception basis. Supervisory team will follow-up. The examples below show situations where there is a need to have the Head of Unit and/or Director involved.

Example 1: If a $1 million dollar building appears on their balance sheet, the supervisory team contacts the entity to find out if it is a mistake. Since 99.999% of the time it would probably be that someone has put the exposure on the wrong line of the form, this task should not require a complex process to fix. As such, the entity should to resubmit the forms. If, however, it is a breach, i.e., the entity should not have that much in land and buildings will be directed to sell, this needs to be escalated to the Director.

Example 2: Under the norms, the entities have fixed upper limits for investments, e.g. not more than 30% in equities. If they were right on the limit on June 29 and on June 30 (i.e., the report day), there is a sudden increase in prices which takes them above the limit, then this is an acceptable situation in the short term. Normally the entities would be given a time limit, e.g. 7 days, to get back within the limits. Under this scenario, the supervisory team would contact entity, seek an explanation, tell the Head of Unit and get the agreement of the entity to sell down within the time specified by the ASF.

Risk Profile. The supervisory team creates or updates the entity risk profile. The risk profile is built upon multiple data sources (e.g., financial returns, corporate profile, market statistics, market developments, recent assessments of entities' internal risk systems, inspection packs) and results in a set of indicators of risk with graduated scales providing a complete and holistic risk profile of each entity. The risk assessment reports indicating the risk levels by entity guide the focus of on-site inspections and choice of entity to be inspected.

The computer generated risk profile template that the supervisory team fills in after every activity related to that entity would have the following sections:

Name of entity			
Date			
Supervisory team			
Reviewed by:			
Overall risk rating	Numeric rating	Qualitative rating	Overall rating
Risk 1 (e.g. Investment Risk)	Significance	Raw score	Modified score
Description			
Risk 2 (e.g. Operational Risk)	Significance	Raw score	Modified score
Description			

Reporting. Supervisory teams create summary reports that show the risk ratings of the entities. . This is supported by a business rule that say an entity with, for example, an overall rating of 3 or above is a high risk , 2 to 2.9 is medium risk, etc. An example is shown in the table below:

Entity	Investment	Legal	Governance	Operational	Capital	Overall[2]
ING	3.1	2.6	2.9	1.9	2	2.75
BCR	3.0	2.8	3.1	2.3	2.2	3.3

These reports should be available to the Director at any time. On a quarterly basis, the information from these reports can be integrated into the reports sent to the Board. The reports be should standard across all entities and sectors and be automatically generated. For example, the Director would say there are ten pension funds in the pension sector, list them out and their risk score. For those that are in the high risk category, the Director would note what drove the overall rating (e.g., operational risk was deemed very high because there is no computer backup of data). The Director would also report on movements between the risk categories, e.g., BCR was medium risk last quarter but has been re-rated to high because it bought a $1 million building and has not sold it yet. One of the critical things is that every time a supervisory team makes a change to a risk rating, it is captured and logged in the system so that ASF can have a an accurate picture over time.

[2] These numbers are not additive i.e they are not meant to be the sum of the numbers to the left but are weighted averages. The weighting factor is the "significance" of the risk to the total risk profile of the entity. For example, for an entity that outsources most of its operations the significance of operational risk would be low and the significance of outsourcing risk would be high. Conversely if it did most of the operations itself, the significance of operational risk would be high and outsourcing risk low

Board Exception. The Board will exercise its decision-making power only in exceptional cases (e.g. the company goes bankrupt, the Board of the pension fund management company, insurer or intermediary is to be removed or the ASF is to appoint an Administrator, i.e., Statutory Manager).

(ii) Onsite Supervision

Inspection Scope. An Annual Inspection Plan includes the order and time of inspections. The Risk Profile reports may provide changes to the annual inspection plan and the adjusted inspection plan is approved by the Director but not by the Board.

ASF takes a risk-focused approach based on an inspection plan that is customized to an entity's risk profile and organizational structure. Under this risk-focused approach, activities are identified; those likely to pose the highest risk to the entity receive the most scrutiny. The supervisory teams employ the assistance of specialists with skills tailored to the specific activities, e.g. actuary, accounting specialists, as needed.

Information Gathering (preliminary). Supervisory team reviews preliminary information such as previous inspections, offsite reviews. This information is now easily accessible from the electronic system and can be compared electronically to threshold prudential norms and their deviations. The supervisory team also gets a pre-populated workbook with the entity information (e.g. capital, latest capital ratio, liquidity, asset exposure), risk profiling and market statistics. The team leader sends the Notice of Inspection and Preliminary Request of Information to the entity (no approval from management is required).

Conduct Inspection. The team conducts the inspection and completes the workbook to record their activities. Presentation and final validation of the findings to the entity is conducted onsite. The Inspection Report is prepared by the supervisory team. The report is approved by the Head of Unit and/or Director on an exception basis.

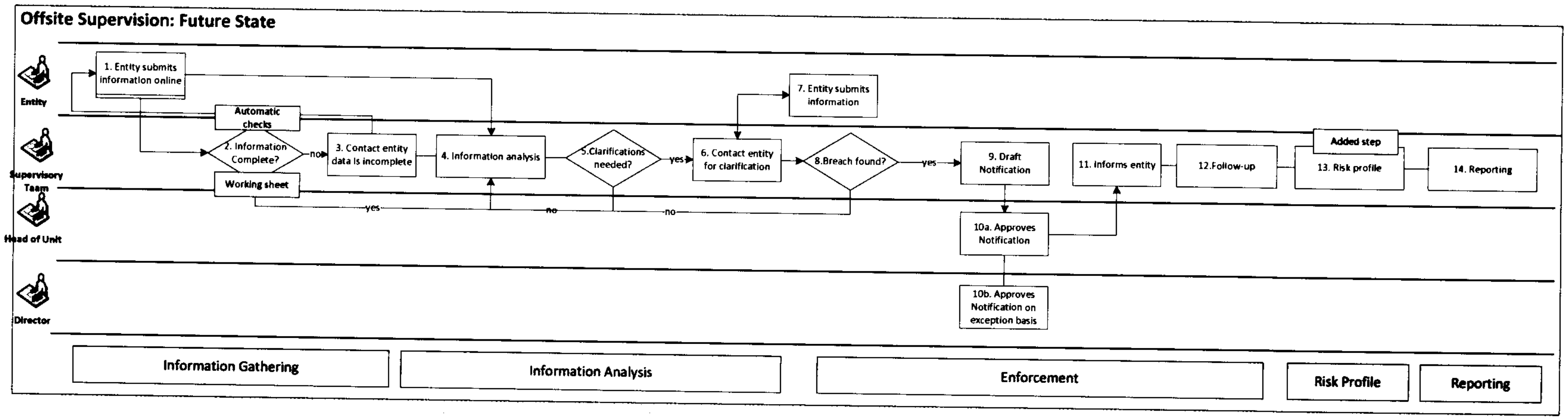
Enforcement. See offsite supervision.

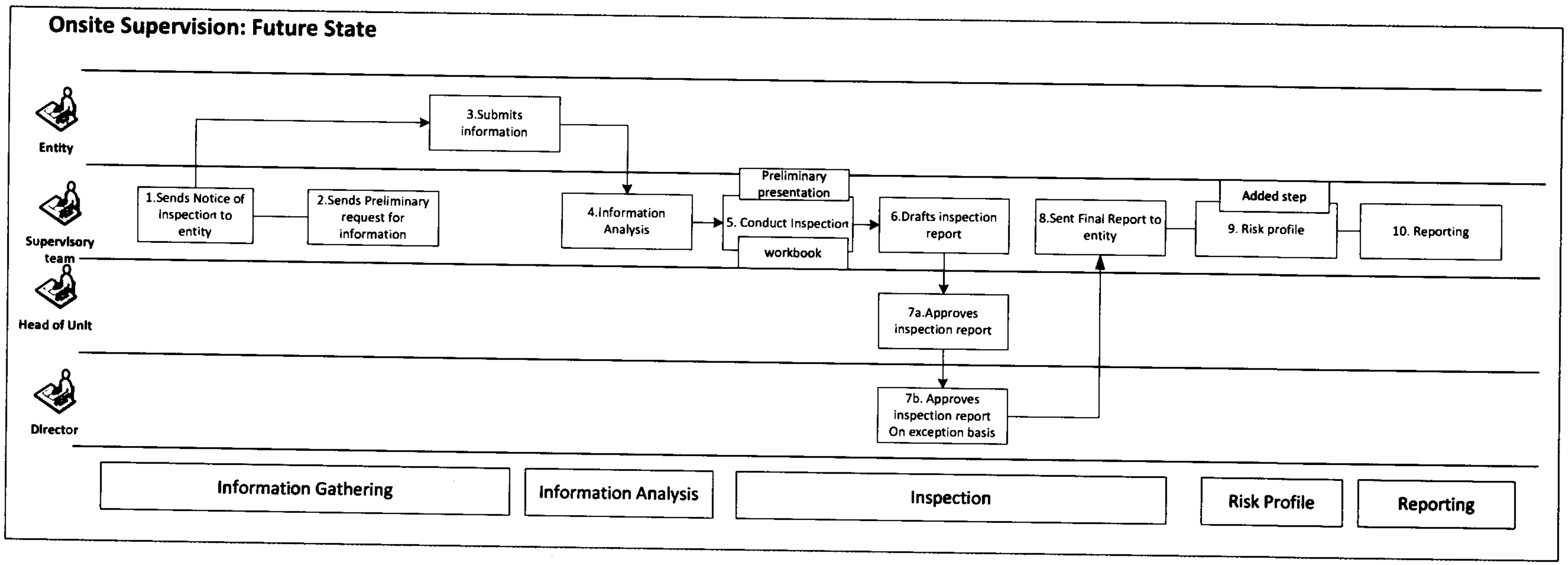
Risk Profile. The supervisory team creates or updates the risk profile.

Reporting. See offsite supervision.

Board Exception. The Board will exercise its decision-making power only in exceptional cases (e.g. the company goes bankrupt, the Board of the pension fund management company, insurer or intermediary is to be removed or the ASF is to appoint an Administrator, i.e., Statutory Manager).

Simplified Process Flows (Illustrative):





G. Recommendations: Governance

190. **The recommendations are preliminary based on a limited assessment.** As indicated earlier, these recommendations assume that all the principles defined earlier are relevant to ASF's operations. It also assumes that the ideal Target Architecture described in the previous section is accepted at ASF.

191. **To achieve process standardization, a pragmatic and balanced approach needs to be taken to define a revised accountability framework to ensure operational efficiency, segregation of duties and compliance to regulations.** A risk based approach needs to be taken to rationalize ASF's accountability framework. For example, accountabilities and decision making authority for routine, low risk transactions or activities should be delegated at the working level. Activities that have a high strategic impact on the operation of ASF and its regulated markets need to be the focus of Management. Materiality in terms of financial, operational or reputational impact should be assessed in rationalizing the accountabilities and process flows. A Working Group led by the Policy, Risk Assessment, and Standards function with members from all the core functions should be established to rationalize accountability framework. Rationalization of the accountability framework can be used to inform the review of the technical job streams in the skill competency framework. Initiatives to improve ASF's transparency should also be identified (e.g., minutes of Board Meetings).

192. **The Governance Model at the Board Level needs to be reviewed in light of the revised accountability framework**. Based on the defined principles and accountability framework, the responsibilities and composition of the Board needs to be re-defined including migrating toward a Board having non executive functions. At the very minimum, the Board needs to set the strategic direction of ASF to achieve ASF's mission and lead the advocacy of its mission to the market players, government entities and other key stakeholders. Board decisions should focus on strategic issues and cases that have the highest impact on the performance of the market.

H. Recommendations: Organizational Structure and Culture

193. **Improve communication between all staff.** Ensure that staff is kept informed and up to date on all change developments in ASF through various formal measures: regular staff meetings and executive management briefing sessions, use of a staff noticeboard, etc. Promote creation of cross-sectorial working groups to address priority issues like standardization of business processes, business requirements development for integrated reporting. These working groups will enable ASF staff to interact outside of their normal duties and foster collaboration.

194. **A dedicated strategic and portfolio management function under the President needs to be established.** This function would coordinate and link the strategy planning process, program execution activities and the results framework to help ensure consistency across the institution. The Function will support, *inter alia*, Strategic and Performance Management, Annual Business Planning, Portfolio Management, Change Management and External Projects Management.

195. **Consider further consolidation by centralizing the pool of specialized skills in areas like Accounting and Regulatory.** This will enable ASF to leverage these limited skills across all functional areas as well provide staff with career enriching opportunities to be broadly exposed.

196. **Formalize the Information Management Function at ASF**. Information must be designed and managed to ensure that it can be quickly shared, analyzed and joined with other information about the same entity or individual. As such, data and information standards are essential to enable interoperability across all sectors and functions. These include establishing common reference data/nomenclature, master data about regulated entities and information classification schemes to facilitate the retrieval and reporting of information. The management of information is normally undertaken information stewards.

I. Recommendations: Core Functions

197. **Supervisory teams assignment. As a follow-up to our recommendation of integrating off-site** and on-site function within a sector, we recommend that both on-site and off-site activities are performed by the same group of supervisors that are pre-assigned on rotation basis to one or several entities. It will allow for a more efficient and better off-site monitoring process as the people who are performing the off-site supervision have been to the entity and do understand the entity's business plan and staff. The supervised entities will feel more comfortable with this approach as they will work consistently with someone who they know already. This will allows for more rigorous supervision and better flow of information to senior management, thus, senior management do not have to go to several different groups of supervisors to find out pertinent information on a particular entity[3].

198. **Streamline and standardize the ASF core processes, i.e., Supervision, Regulations and Consumer Complaints, for common functions from information gathering to reporting activities**. We recommend the establishment of a Working Group with members from all core function to perform this activity before system implementation starts.

[3] See International developments in the organizational structure of financial services supervision by Kenneth K Mwenda and Alex Fleming (2001)

199. **Enable electronic submission and filing of entity documents and data based on standard forms and descriptors.** The newly established Information Management function will be responsible to facilitate discussions and gather requirements on the standardized forms and documents that need to be automated across all sectors. It will define and enforce protocols for filing core official electronic documents and files in the enterprise document management system.

200. **Consolidated data and documents repository for reporting and end-user reporting tools for self-service.** Investments in technologies, accompanied by process changes, will enable ASF to consolidate the data and documents collected and generate reports more efficiently. An enterprise Electronic Document and Records Management System, Case Management Systems and Business Intelligence Solutions will need to support the consolidation of information and enable staff easy access to the data.

J. Recommendations: Support Functions

201. **Communication function needs to be strengthened.** This unit would be responsible, for media campaigns, financial education in addition to the media relations and internal communications function already performing.

202. **To enhance its human capital, ASF needs to invest in updating its staff skills.** Learning budgets must be allocated to enable staff with keep pace with the changing regulatory environment. Technical training in, inter alia, risk based supervision, Solvency II framework, are essential courses that are needed at this time.

203. **The corporate IT function needs to be strengthened.** The IT functions needs to perform at the level expected of the regulated agencies. As such, an IT Strategy needs to be developed to accompany the process modernization of ASF. The IT Strategy needs to address the IT organization, skills/competencies required for the target state, the formal process for IT management required to manage IT operational risks, and the technologies required to support the full digitization of ASF.

K. Recommendations: Leveraging Information Technology

204. **A multi-year technology renewal program is recommended to support ASF's streamlined and integrated business processes defined in its business architecture.** Leveraging modern, reliable and innovative technologies will transform the way ASF staff will perform its functions and enable them to do more value adding activities.

- Through technologies, ASF will modernize its filing practices. A one-stop shop, ASF's external web portal will be available to all regulated entities to electronically submit their documents and data. Consumers can directly submit their complaints through the portal and keep track of the status of their complaints on-line. Relevant stakeholders who need to comment on the proposed regulations will be able to do so through this portal. The portal will be secure with the appropriate levels of access granted to the various stakeholders.

- Through case management and business process workflow technologies, ASF's business processes will be automated to increase productivity and enhance collaboration. Automated tracking, notification and audit capabilities, as well as management reporting will be available to support ASF operations.
- A common document management system and a data warehouse will store internally generated data and information collected from the entities. These systems will be supplemented by an enterprise search tool which will facilitate the retrieval of information.
- An enterprise resource planning (ERP) system will be available to consolidate all of ASF's administrative systems and strengthen its management controls.
- Business intelligence tools will be available to support ASF's analytical functions as well as generate operational and management reports. BI systems should support the analysis of large volumes of data to detect patterns, identify historical trends, and provide predictive analytics. Management dashboards will be available to provide the best available information from multiple resources (integrated in the data warehouse and document management systems).
- A secure Intranet will also be developed to facilitate internal communications and collaboration. Internal services (e.g., HR leave requests, self-service reports, etc) can be accessed through the Intranet and facilitate self service requests.
- ASF will support a reliable computing environment that provides high performance, security and business continuity through adoption of modern technologies such as virtualization, clustering, encryption, etc.

205. The high level reference architecture is shown in Figure 6. The supporting technology architecture is shown in Figure 7.

Figure 6: High-Level Reference Architecture

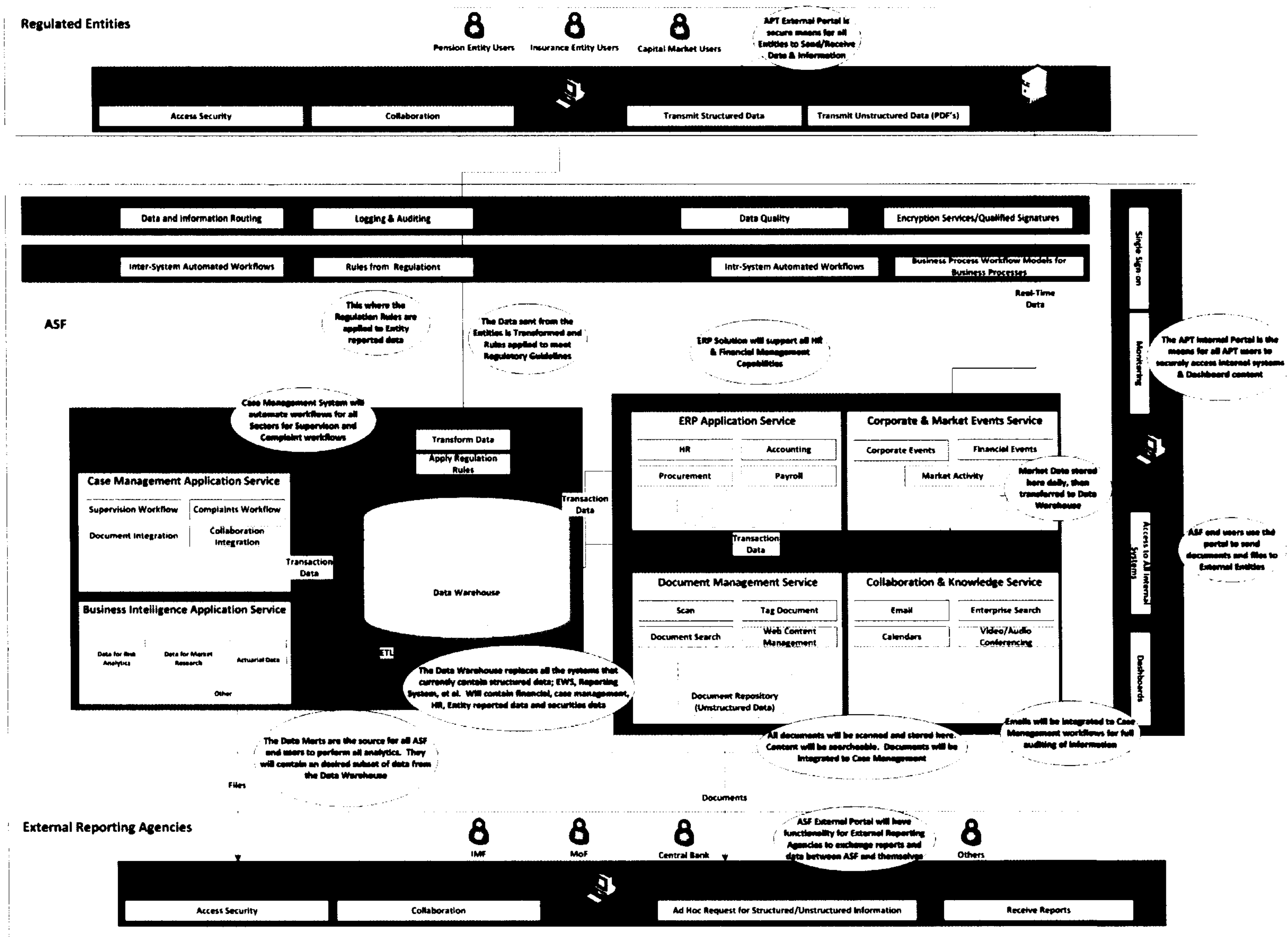
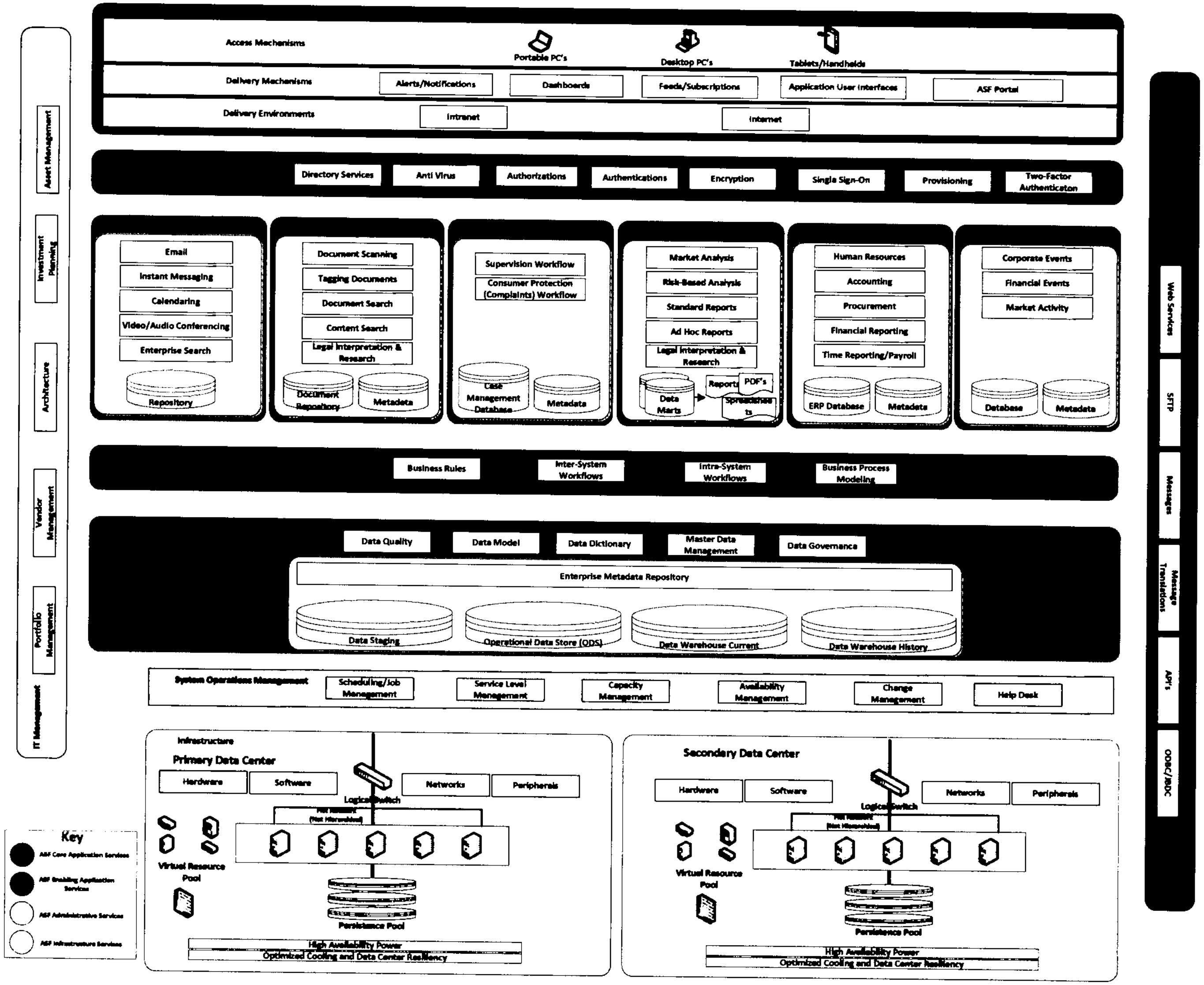


Figure 7: High-level Technology Architecture



206. **The implementation plan presented in this section is a three-year renewal program designed to achieve the overall vision of Digital ASF**. Through this investment plan, ASF employees will be able to execute their daily responsibilities more easily and effectively with modern equipment and easy access to information. ASF Management will be able to better track and direct the authority activities by having a 360 degree view of its activities and impact to the regulated markets. The regulated entities and affected stakeholders (e.g., consumers) will have better tools to communicate and interact with ASF.

207. **The estimated cost of the investment plan is almost 10 million dollars ($10m).** The costing estimates of each of the programs and initiatives were reviewed based on local prices, known vendor solutions, prices of commercial off-the-shelf (COTS) products, and best guess estimates. A contingency of ten (10%) percent is also budgeted to accommodate unforeseen costs.

208. **The ASF IT Investment Plan will be implemented over three years in four releases, initially building on the foundational components and gradually adding capabilities through the implementation of software solutions.** Annex II provides the details associated with each Release schedule.

- Release 1 will provide a robust IT Infrastructure and an Information Architecture required to support shared databases (data and documents) across all sectors. Duration: 6 months. Cost: 1.3m
- Release 2 will provide the Registry and the shared data and document systems, initially supporting the Insurance sector. Duration: 9 months. Cost: $2.0m
- Release 3 builds upon the progress in Release 2. The data collection and reporting processes for Capital Markets and Pension will be integrated into the overall shared data and document systems. Automated workflows will be implemented in the supervision and consumer complaints function in the Insurance Sector. Duration: 12 months. Cost: $3.2m
- Release 4 completes the automation of the core functions across all sectors. An integrated administrative system (i.e., enterprise resource planning) will be implemented to replace the existing financial and HR systems and provide better financial and management controls. Duration: 12 months. Cost: $2.6m

		Duration (months)	Total	IT Infrastructure and Platforms	Insurance	Capital markets	Pension	Other
Release 1	IT Infrastructure Modernization and User Productivity Tools	6	$ 1,304,950	• Procure & install infrastructure for Primary Data Center to support Target State Technology Architecture • Procure & Install 150 new workstations • Procure and install local and network printers • Certified Intranet • Information Security • Collaboration Platform (email, instant messaging, calendaring • IT create data models for new Data Warehouse • Procure & Implement physical security components (badge readers)	• Data, Form and Reporting Inventory, Rationalization, • Design standard template for all reports and Sectors • Design utility to transform Excel files to XML at the request of the Entities •			• Service Level Agreements for Collaboration Platform • Asset Management Solution to track IT and Business Assets
Release 2	Data Collection and Reporting for Insurance	9	$ 1,968,350	• Procure and implement Audio/Video Conference Capability • Procure & install remaining workstations and high speed scanners • Version 1 of the Data Warehouse & ODS • Data Marts for Insurance reporting and Analytical requirements • Version 1 of the Automated business process workflows and rules service	• New Portal to support submission of standardized report • Document Management • Reporting/ Analysis • Automated Business Rules for Regulations • Registration, document labeling, • Document			• Service Level Agreements for Insurance Portal • Centralized Help Desk for internal and external stakeholders

Vendor)						No maintenance. No source code.
6. Security Credentials	MS Access 97	MS Access 97	N	Security & Identity Access Management	Yes	Single Sign-on capabilities
7. Baza	Oracle 10g	MS Access 97	N	Data Management	Yes	Repository of Authorized Entities
8. INFCONT	Oracle 11g	MS Access 2007	N	Data Management	Yes	Repository of Romanian Securities
9. Official Register (REGISTRU CNVM)	MySQL, Oracle 11g	MS Access 97, PHP	N	Document & Records Management, Data Management	Yes	Post content to the web site
10. Meeting Minutes	MS Access 97	MS Access 97	N	Collaboration & Knowledge Management	Yes	
11. Registry of Authorized Entities	Oracle 11g	MS Access 2007	N	Data Management, BI	Yes	Registers the entities from Baza
12. Transaction Reporting (TREM)	Oracle 11g	Java	N	BI	Yes	Standardized reporting for ESMA (European Securities Market Authority)
13. CSDB (Reporting Platform for Reports with Electronic Signatures, # 4 above)	Oracle 11g	Java	N	BI	Yes	
14. Auto Update	Oracle 11g	Java	N	System Operations & IT Management	Yes	Automated software distribution to desktops
Pensions						
Name	**Database**	**Application**	**COTS?**	**Domains**	**Sunset?**	**Comments**
1. Supervision	MySQL	PHP	N	Information Integration, Data Management, BI	Y	
2. Fees Management	MySQL	PHP	N	Financial Management, BI	Y	
3. Reporting Module	?	C++ Builder	N	Information Integration, Data Management	Y	Used by entities to assist in creating their XML files for transmission to the ASF
4. WebMail	MySQL	PHP	N*	Collaboration, Security & Identity Access Management, Information Integration	Y	*Used Open Source. Keeps track of deleted emails. Integrated with Supervision, #1 above
5. Reports Manager	MySQL	PHP	N*	Data Management, Security & Identity Access Management, Information Integration	Y	*Used Open Source. Keeps track of entities creating reports (auditing creation, deletion of report files)
6. ITBOX	MySQL	PHP	N*	Information Integration	Y	*Used Open Source. Used to download the reports created in the Reports Manager, #5 above
7. User Online-Help Consolidation	MySQL	PHP	N*	Information Access	Y	*Used Open Source. Consolidates all online help from all systems

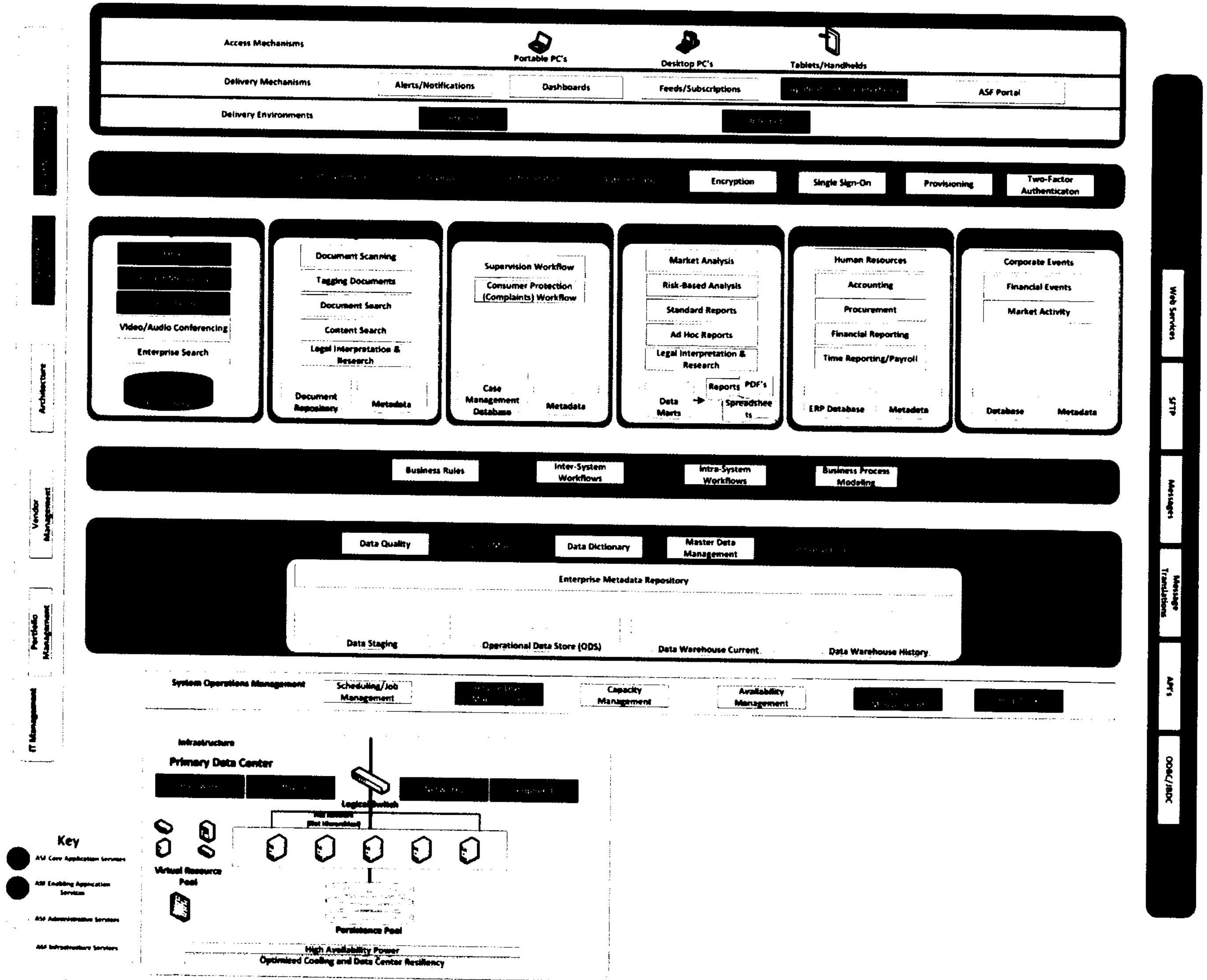
Annex II: Detailed IT Release Plan

1. ASF Release 1.0 High-Level Description

Topic	Description
Key Features of the Release	• Procure and install 150 new PC's for the staff (Release 2 will procure the rest) • Standardized Desktop Operating System for new computers • Procure and install network printers and local printers • Implement the infrastructure components required for target state requirements in the primary data center, e.g., servers, networks, system software, routers, etc. • Purchase a collaboration platform to enable email, instant messaging, calendaring and document collaboration tool, • IT begins to develop the data warehouse model used to construct the data warehouse. Focus is on Reference Tables for recurring data and Insurance data • IT creates standard XML file template for all Insurance current state reports • Standardize transformation of .xls files to XML to support Business Entity needs
Assumptions	• Use of standard and open technology architectures should be mandatory for all IT components • Primary Data Center will be in the same building as the office, in the prior tenants data center • New Collaboration platform will be phased in. Exchange 2007 will be leveraged in parallel for 1-plus years • System Operations and hardware set up will be completed by a combination of Vendor resources (built into contract) and internal ASF IT staff
Skills Readiness	IT Skills: PMO disciplines, Data Modeling, System Administration, Integration End User Skills: Training for use of new Collaboration tool (email, calendaring, etc.)
Domain Capability Descriptions	
1. Information Access	• Intranet created and certified • Exchange 2007 System User Interface • New Collaboration Solution User Interface
2. Security & Identity Access Management	• Consolidated directory services for user authentications and authorizations • Anti virus software on all desktops and servers, one version for each • Consolidate authorization and authentication service and adopt for new collaboration platform • Procure and install physical security capability, i.e., badge readers
3. Collaboration & Knowledge Management	• New collaboration platform is installed and made available to subset of staff (email, instant messaging, calendaring and document collaboration). MS Office 2007 will remain the collaboration solution for a subset of staff
4. Document & Records Management	None

Topic	Description
5. Case Management	None
6. Business Intelligence	None
7. ERP	None
8. Corporate & Market Events Service	None
9, Business Process Workflow & Rules	None
10. Data Management	• Create V1 of the data models and solution architectures for the ODS and Data Warehouse
11. System Operations Management	• Create V1 of the Service Level Management agreement leveraging the new Collaboration Platform as the basis for the initial requirements • Purchase software solution to manage system and application-level Change Management • Create V1 of the Help Desk that will be the source for users and external entities to get technical assistance in one place • Create operating procedures
12. Infrastructure	• Procure and install the infrastructure components that will meet target state business requirements, e.g., performance, space, etc. • V1-Procure and install PC's, local printers and network printers (this will not include equipment for all staff in this version)
13. IT Management	• Procure Asset Management solution to manage IT assets as well as Business assets, e.g., chairs, tables, etc. • Load assets into system and manage • Standardize Investment planning. Consolidate all project requests, scoping, costing as part of the ASF PMO
14. Information Integration	• Design and build solution to transform .xls files into XML template (transformation service)
Systems Targeted to be Sun-Set	
Insurance	None
Capital Markets	None
Pensions	None
Estimated Costs	
Estimated Duration	6 Months (Effort)
Estimated Costs and Description (in $US)	Hardware/Software -980,950 Staff – $204,000 ($3,400 average salary/month x 10 staff x 6 months) Consultants – $120,000 ($10,000 per month x 2 consultants X 6 months) TOTAL - $1,304,950

Figure 8: ASF Release 1 Technology Architecture



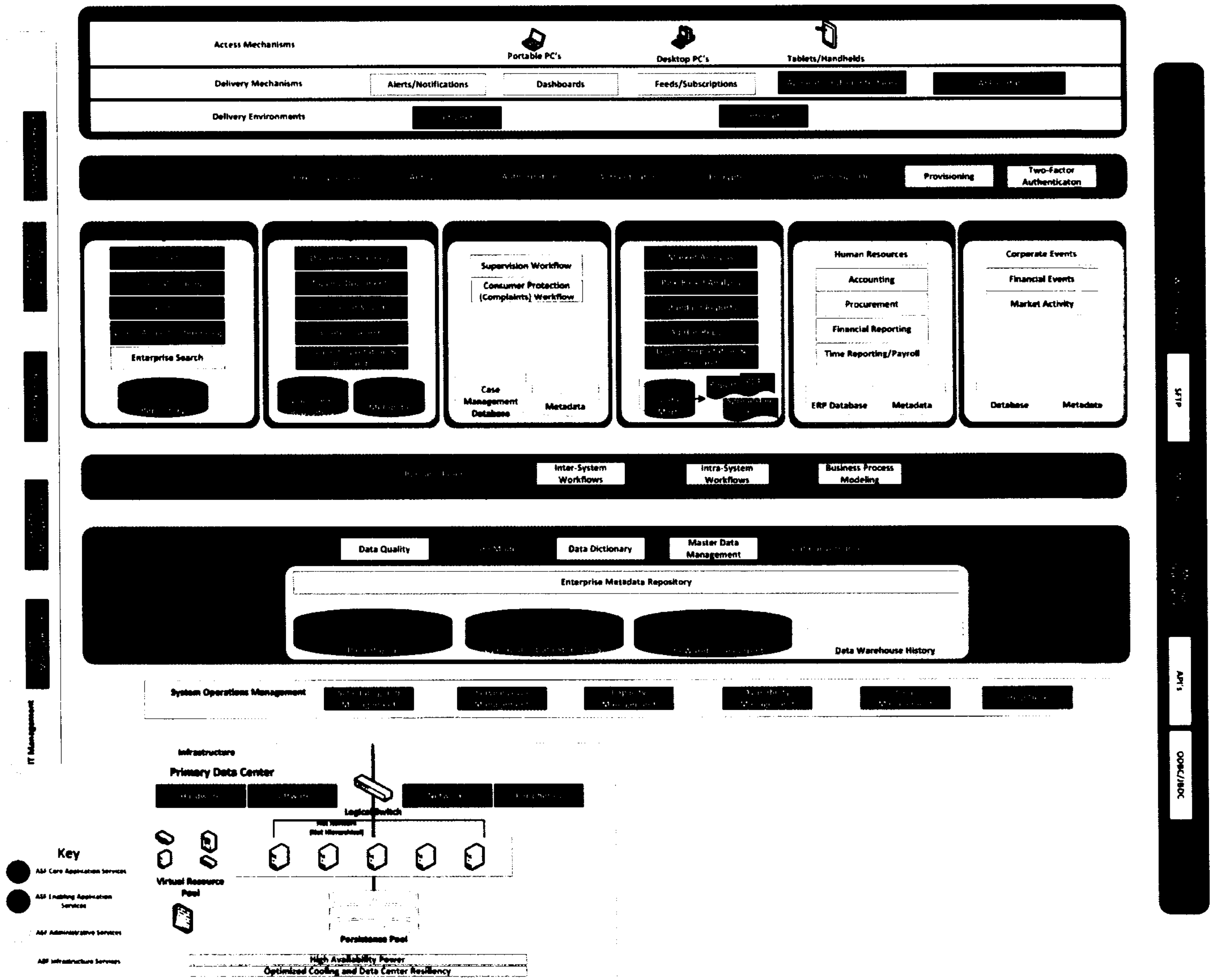
Bold components are the things getting implemented as described in the table above

2. ASF Release 2.0 High-Level Description

Topic	Description
Key Features of the Release	• Procure and implement remaining new PC's (350) and scanners • Implement revised data submission solution for the Insurance entities (ASF External Portal) • Regulation-related business rules automated for Insurance data • Purchase audio and video recording solutions and leverage in selected meeting rooms • Document Management for Insurance forms (scan, tag, store, search, etc.) • Insurance Reporting and Analytic capabilities using the data warehouse and data marts • External ASF Portal leveraged for reporting needs to external entities
Assumptions	• New solutions will continue to operate in parallel to current state solutions (this is standard for an evolutionary approach). An ODS and the integration service will intelligently move data to the right platforms • Need Registration office expanded to scan and tag insurance documents • There are critical systems used by the Insurance Sector. ASF renewed the software maintenance agreement with RomSys for EWS and CEDAM that is valid until 7/15. This will prevent retiring these systems and will also require the architecture to leverage the solutions in the short term with a strategy to sunset in late 2015. The assumption is that ASF will not renew this agreement and that the EWS and CEDAM will be replaced in Release 3 of this migration plan.
Skills Readiness	IT Skills Readiness: Integration, ETL, Database Management, BI User Skill Readiness: Document management training, Collaboration Tool Training
Domain Capability Descriptions	
1. Information Access	• Create V1 of the ASF External Portal for Insurance Entities that will standardize all report submissions • Create V1 of the ASF Internal Portal to access the Collaboration systems and the Document Management Solution • Document Management System User Interface
2. Security & Identity Access Management	• Data Encryption and use of new consolidated security services
3. Collaboration & Knowledge Management	• Procure Audio & Video Recording solutions for identified meeting rooms
4. Document & Records Management	• Information Taxonomy for Insurance • Document & Records Management for Insurance related content, e.g., scan, tag, search etc.
5. Case Management	None
6. Business Intelligence	• V1 of the Insurance Data Marts are created to enable Insurance Analytics
7. ERP	None
8. Corporate & Market Events Service	None
9, Business Process Workflow & Rules	• Automated Business Rules for Insurance regulation rules

Topic	Description
10. Data Management	• Create V1 of the Data Staging, Operational Data Store, and Data Warehouse for Insurance data • Operational Data Store is used to source current state forms from the entities to the current set of applications
11. System Operations Management	• Create V2 of the Service Level Management agreement leveraging new services implemented • Create V2 of the Help Desk that will be the source for users and external entities to get technical assistance • Capacity and Availability Management automated.
12. Infrastructure	• Procure and install remaining PC's and Scanners
13. IT Management	• Standardize Vendor, Portfolio Management and reporting practices • Refine PMO
14. Information Integration	• Procure Information Integration Solution and implement for Insurance requirements. • Intelligent routing of old and new message types to the ODS or staging areas
Systems Targeted to be Sun-Set	
Insurance	Authorizations, Actuarial (See note above in Assumptions)
Capital Markets	None
Pensions	None
Estimated Costs	
Estimated Duration	9-months (Effort)
Estimated Costs and Description ($US)	Hardware/Software - $1,212,350 Staff – $306,000 ($3,400 average salary/month x 10 staff x 9 months) Consultants – $450,000 ($10,000 per month x 5 consultants X 9 months) Total - $1,968,350

Figure 9: ASF Release 2 Technology Architecture



Bold components are the things getting implemented as described in the table above.

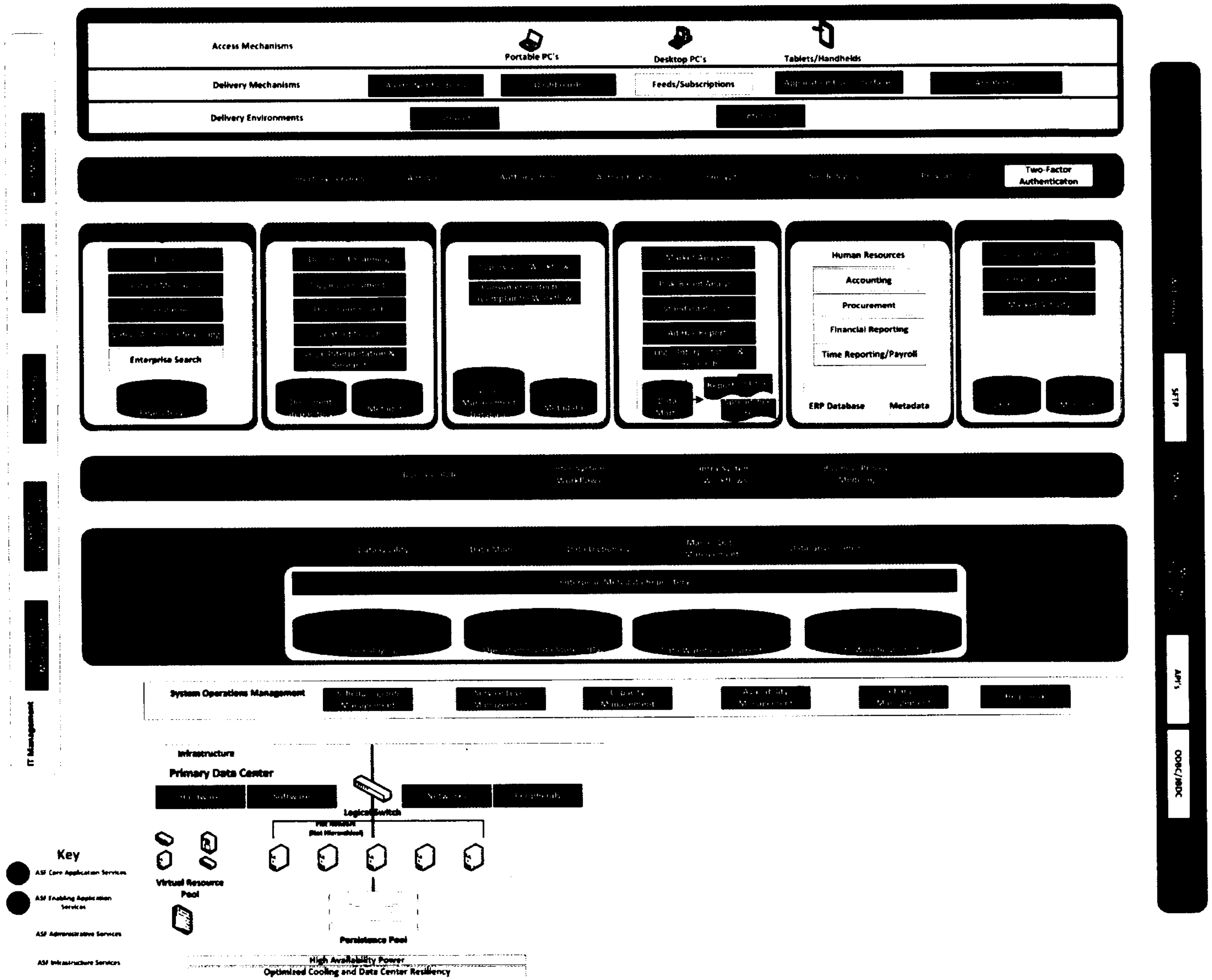
3. ASF Release 3.0 High-Level Description

Topic	Description
Key Features of the Release	• Procure & Implement Case Management Solution • Supervision Workflows for Insurance & Capital Markets • Complaints Workflows for Insurance & Capital Markets • Implement revised data submission solution for the Capital Markets (ASF External Portal) • Regulation-related business rules automated for Capital Markets data • Document Management for Capital Market Forms, e.g., search for documents • Capital Markets Reporting and Analysis capabilities using the data warehouse and data marts • Implement Dashboard to display workflows and performance metrics for the business operations and system metrics • Alerts and Notifications are implemented to automatically display Supervision and Complaint Workflow Events to the Dashboard • Corporate, Financial Events and Market activity (real-time and end of day) hosted in new solutions service, which will have metadata and other capabilities: (requirements for a database to store real-time data requires data structures different than the data warehouse). Data will be transferred tot the data warehouse nightly) to enable more extensive analytics. Intra-day anomalies will be detected in this new service
Assumptions	1. New solutions will continue to operate in parallel to current state solutions (this is standard for an evolutionary approach). An ODS and the integration service will intelligently move data to the right platforms 2. Need Registration office expanded to scan and tag capital markets documents 3. There are critical systems used by the Capital Markets that currently do not have software maintenance agreements with the Vendor (RomSys). These include Electronic Surveillance, Integrated Reporting Service (EWS) and Surveillance System for Regulated Markets. The assumption is that these contracts will not be negotiated and the ASF will not extend their relationship in this space with RomSys. *Note: There is risk with not having maintenance contracts, as the Vendor will not provide software support in case of issues, and the IT department can not edit the code, instead they have to build ancillary solutions, which they have done.*
Skills Readiness	IT Skills: Integration, Market Data Service solution development with assistance from consultants, Data Warehouse, ETL End User Skills: case management training, document management training
Domain Capability Descriptions	
1. Information Access	• Create V1 of the ASF External Portal for Capital Markets Entities that will standardize all report submissions • Create V2 of the ASF Internal Portal to access new applications, e.g., case management, dashboards, etc • Create V1 of the ASF Dashboard to display performance metrics and workflow events for Supervision and Complaints workflows • Create V1 of the Alerts/Notification service • Application User Interface for Case Management • Application Interface for Market, Corporate and Financial Service User Interface
2. Security & Identity Access Management	• Automated end-user security provisioning for internal and external users
3. Collaboration &	• Standardize to one collaboration platform

Topic	Description
Knowledge Management	
4. Document & Records Management	• Information Taxonomy V2 • Need Registration office expanded to scan and tag insurance documents • Document & Records Management for Capital Market related content
5. Case Management	• Supervision automated workflows for Insurance and Capital Markets • Complaints automated workflows for Insurance and Capital markets
6. Business Intelligence	• V2 includes Data Marts for Insurance & Capital Markets Data Marts are created to enable analytical requirements
7. ERP	
8. Corporate & Market Events Service	• Implement Corporate and Financial Events Service • Implement Market Activity Service • Real-time, high volumes of data
9, Business Process Workflow & Rules	• Automated Business Rules for Capital Markets regulation rules
10. Data Management	• Create V2 of the Data Staging, Operational Data Store, and Data Warehouse for Insurance and Capital Markets • Operational Data Store is used to source current state forms from the entities to the current set of applications (continued) • V1 of Enterprise Metadata that will store metadata from case management, document management, data warehouse data, and business rules data (regulation rules) • V1 of Data Warehouse (History). Separate data warehouse will be instantiated to be the source for the data in the data warehouse that is greater than 1 year old. Both will be a source to the Data Marts • V1 Data Dictionary to assist end users doing reporting and analytics
11. System Operations Management	• Create V3 of the Service Level Management agreement leveraging new services implemented • Create V3 of the Help Desk that will be the source for users and external entities to get technical assistance
12. Infrastructure	None
13. IT Management	Refine PMO
14. Information Integration	• V2 of the Information Integration Service (extended logging, auditing) • V2 Intelligent routing of old and new message types to the ODS or staging areas
Systems Targeted to be Sun-Set	
Insurance	CEDAM, EWS (see Note in Release 2 Description)
Capital Markets	Security Credentials, INFCONT, Baza, Official Registry, Registry of Authorized Entities, TEM, Meeting Minutes, CSDM, Auto Update (see Note above in Assumptions)
Pensions	None
Estimated Costs	
Estimated Duration	1 Year (Effort)
Estimated Costs and	Hardware/Software - $1,150,000

Topic	Description
Description ($US)	Staff – $816,000 ($3,400 average salary/month x 20 staff x 12 months) Consultants – $1,200,000 ($10,000 per month x 10 consultants X 12 months) Total - $3,166,000

Figure 10: ASF Release 3 Technology Architecture



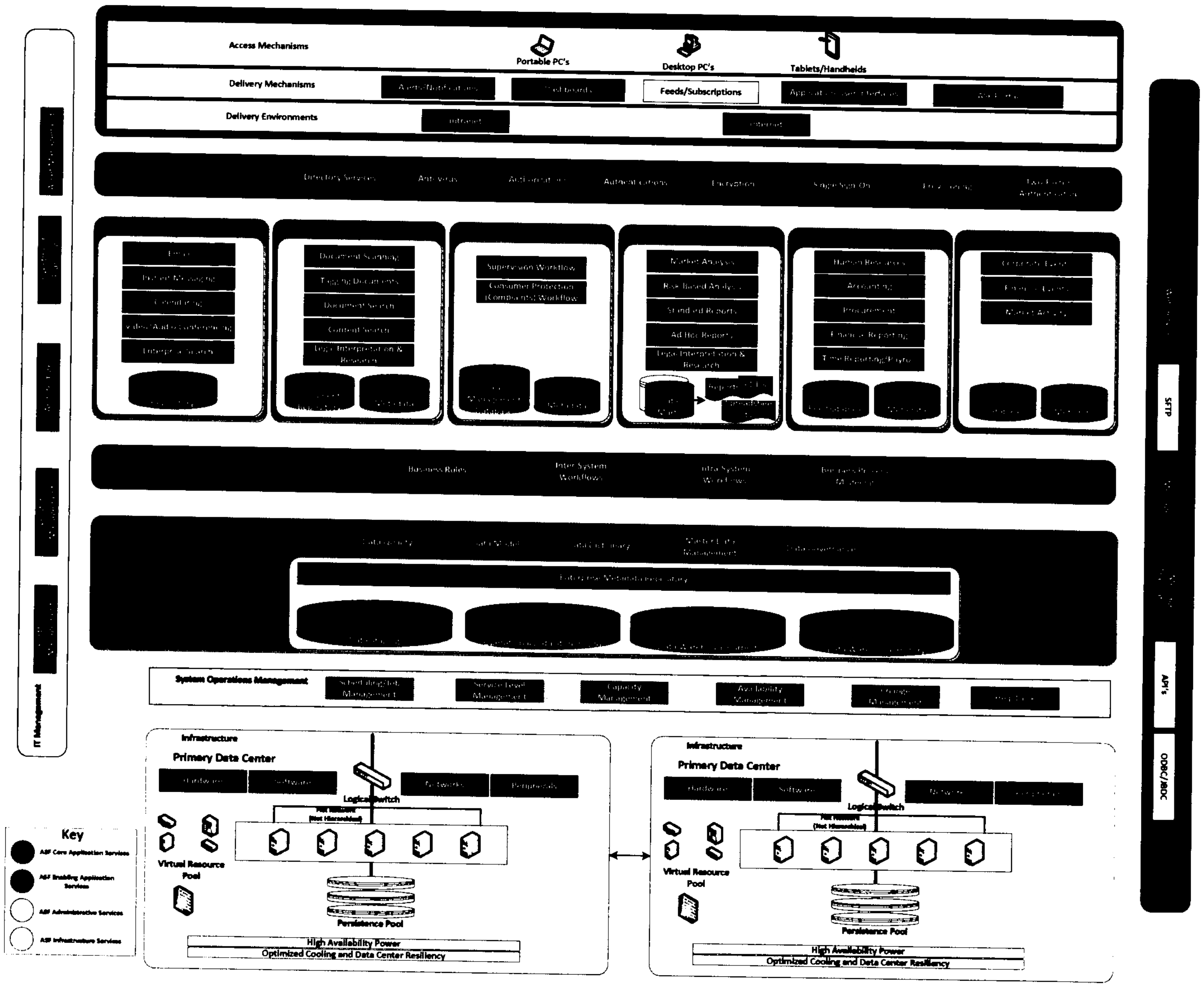
Bold components are the things getting implemented as described in the table above.

4. ASF Release 4.0 High-Level Description

Topic	Description
Key Features of the Release	• Handheld devices can be used to check dashboards and alerts • Remote access to APT Internal Portal using two-factor authentication • Supervision Workflows for Pensions • Complaints workflows for Pensions • Regulation-related business rules automated for Pensions data • Implement revised data submission solution for the Pensions (ASF External Portal), • Document Management for Pension Capital Forms, e.g., search for documents • Pension Reporting and Analysis capabilities using the data warehouse and data marts • Implement Dashboard to display workflows and performance metrics for the business operations and system metrics • Alerts and Notifications are implemented to automatically display Supervision and Complaint Workflow Events to the Dashboard • ERP Solution implemented for Human Resources, Financial Management & Procurements • Enterprise search across all application services for structured and unstructured data • Legacy Systems have been sun-set
Assumptions	4. Use of STS as the contingency data center 5. No software licenses will be required in the contingency site. Will negotiate that only one instance if the software solution will be running (in the case of a dister recovery, the software will only be running from the contingency site and not the primary site
Skills Readiness	IT Skills: Integration, ETL, Change Management, Configuration Management End User Skills: Document Management, Case Management
Domain Capability Descriptions	
1. Information Access	• Create V3 of the ASF External Portal for Pensions Entities that will standardize all report submissions • Create V3 of the ASF Internal Portal that will access all internal ASF application solutions and services • Create V2 of the ASF Dashboard to display performance metrics and workflow events for Supervision and Complaints workflows • Create V2 of the Alerts/Notification service • ERP Solution User Interface
2. Security & Identity Access Management	• Two-Factor Authentication to enable hand-held device (and remote) access to applications
3. Collaboration & Knowledge Management	• Enterprise Search across case management, document management and other application service solutions

Topic	Description
4. Document & Records Management	• Information Taxonomy V3 • Document & Records Management for Pensions related content
5. Case Management	• Supervision automated workflows for Pensions • Complaints automated workflows for Pensions
6. Business Intelligence	• V3 includes Data Marts for Pensions are created to enable analytical requirements
7. ERP	• Implement HR, Financial Management & Procurement Capabilities • Integrate with SEAP (MoF solution)
8. Corporate & Market Events Service	•
9, Business Process Workflow & Rules	• Automated Business Rules for Pensions regulation rules
10. Data Management	• Create V3 of the Data Staging, Operational Data Store, and Data Warehouse for Pensions • Operational Data Store is used to source current state forms from the entities to the current set of applications (continued) • V2 of Enterprise Metadata • V2 of Data Warehouse (History)
11. System Operations Management	• Create V4 of the Service Level Management agreement leveraging new services implemented • Create V4 of the Help Desk that will be the source for users and external entities to get technical assistance
12. Infrastructure	• Procure and implement hardware and software in the contingency data center
13. IT Management	• Refine PMO
14. Information Integration	• V3 of the Information Integration Service
Systems Targeted to be Sun-Set	
Insurance	Operating Fees
Capital Markets	Electronic Surveillance, Surveillance System for Regulated Markets, Integrated Reporting System
Pensions	Supervision, Fees Management, Reporting Module, WebMail, Reports Manager
Estimated Costs	
Estimated Duration	1 Year (Effort)
Estimated Costs and Description ($US)	Hardware/Software - $631,700 (For Contingency Site & ERP) Staff – $816,000 ($3,400 average salary/month x 20 staff x 12 months) Consultants – $1,200,000 ($10,000 per month x 10 consultants X 12 months) Total - $2,647,700

Figure 11: ASF Release 4 (TARGET) Technology Architecture



Bold components are the things getting implemented as described in the table above.