

Chapter 5

Summary and Future Work

5.1 Conclusion

Current trends in the management of insurance companies emphasize the need for an improved means of dynamic financial analysis. While insurers have had their challenges in implementing a suitable program, MLDFA discussed in this paper provides an improved approach that would meet the desired requirements.

Evolution of DFA models is inevitable, and evolution is part of maintenance. One of the problems with the implementation for DFA systems is that significant productivity gains will result only from the reuse of analysis and design information. MLDFA architecture plays a central role in its successful development. In our method, two main subsystems, Model Transformation Systems and Processing Subsystems, are developed through the activities of dividing DFA processes into three phases.

In each subsystem, multiple components are designed to deal with the divided specifications of a complete DFA model. Our approach first determines common and variable features, and then develops an implementation strategy that allocates the divided specifications into shared reusable components.

In addition to the well-known advantages of object-orientation, MLDFA also yields a further advantage, which is not only for system engineers for maintainability easiness, but also for the users. With the object-oriented style user interface, MLDFA provides the user with means to conveniently structure the model in a natural way.

We believe that the proposed approach is suitable and feasible for the formulation and refinement of DFA models. Although MLDFA is in an early stage of implementation, we hope that this approach has the potential to bring DFA to a wider audience because it could help insurance companies in total cost reduction of the life cycle DFA system.

5.2 Future Work

As an ongoing effort, we would not claim that MLDFA has captured all information relevant to DFA domain. There are still some interesting open issues in constructing a DFA application.

- MLDFA is currently useful for Property and Casualty insurance companies, and it may be further extended to other kind of insurance companies.
- MLDFA currently forecasts the amount of assets and liabilities based on stochastic simulation. Further research could incorporate scenario testing into MLDFA to enhance its capabilities
- The emphasis of this research topic is on the application architecture rather than on the efficiency of its execution. An optimizer could be implemented to improve the performance of the generated codes.