

Consumers' Insurance Literacy

- Cude survey (2005) finds that many consumers do not understand insurance disclosures, and admit that they do not read them.
- National Association of Insurance Commissioners (2010) survey found that only one-third of consumers believed they have a good understanding of their insurance policies.
- Survey and focus group evidence show that word-of-mouth and informal sources are the dominant information-gathering strategies for insurance consumers (Schwarcz, 2010; Tennyson, 2011).

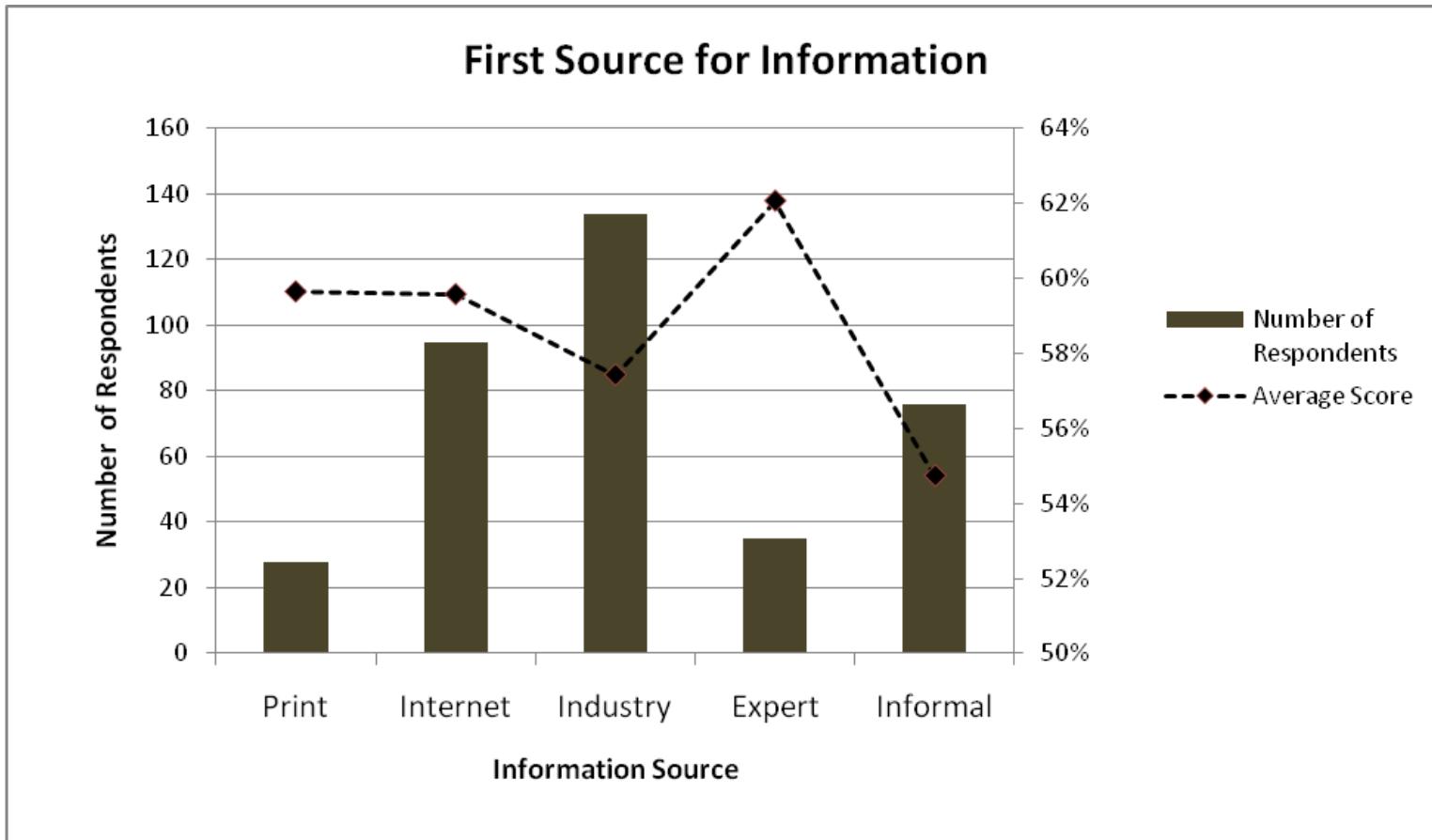
Common Misperceptions

- Based on focus groups (7) with a total of 66 participants fielded by Tennyson and Bristow (2002).
- Most focus group participants had significant experience with insurance purchase, and a majority characterized themselves as somewhat or very knowledgeable about insurance.
- Yet, through discussion, some misconceptions about insurance were demonstrated.
 - Purchasing insurance that is arguably not needed because the monthly premium was low
 - Believing that automobile insurance premiums one has paid over time should “add up” to pay for the accident losses one experiences
 - Believing that experiencing a loss indicates insurance was needed, while experiencing no loss indicates that insurance premiums were wasted
 - Believing that the insurance needs of all consumers are the same.

Consumer Knowledge

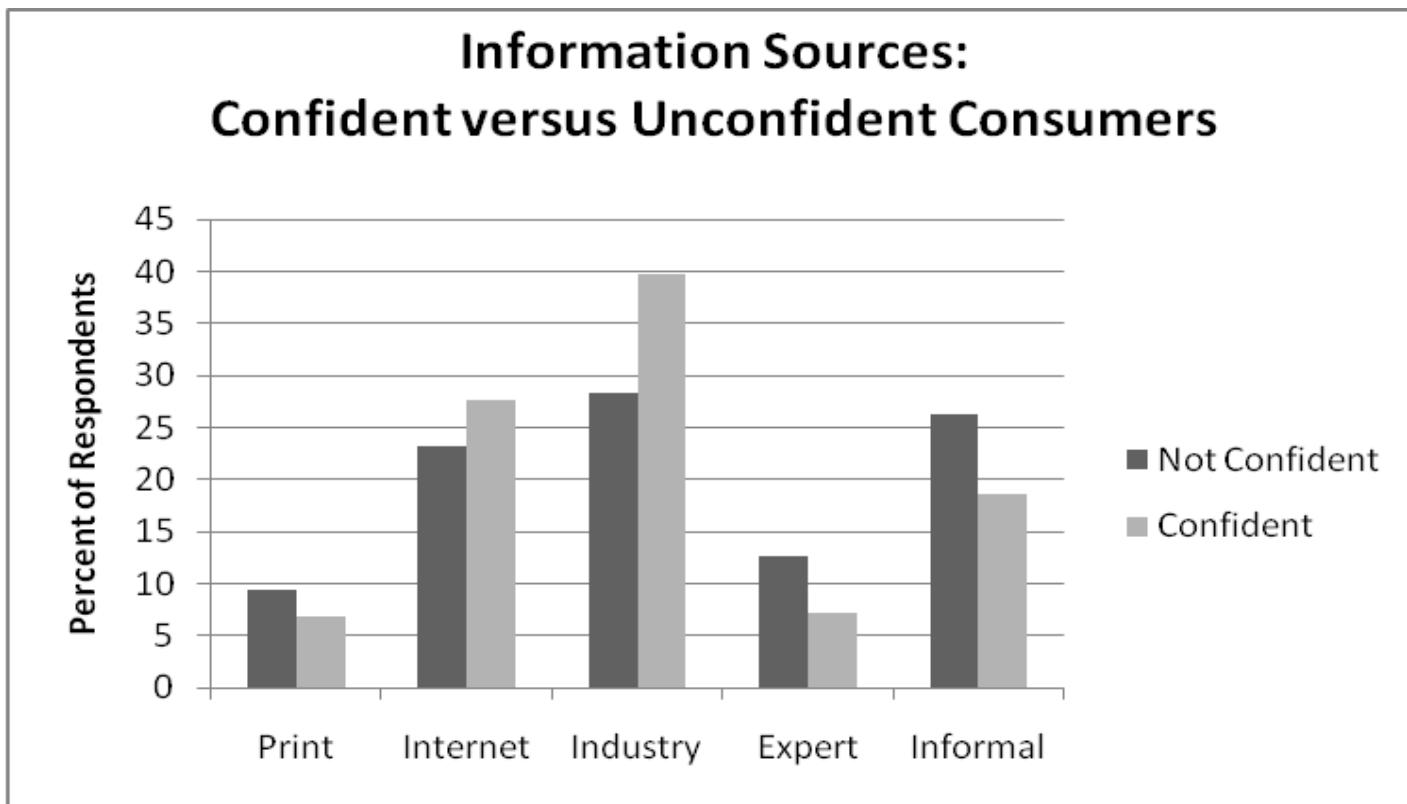
- Two recent surveys have attempted to assess insurance literacy more generally, using samples of adults of all ages.
 - See National Association of Insurance Commissioners (NAIC, 2010) and Tennyson (2011)
- Results:
 - The average consumer is not very well informed, mean scores on these assessments are less than 60 percent.
 - The average consumer is better able to answer questions regarding insurance principles and insurance terminology than questions regarding terms and conditions of specific policies.

Information Source and Quiz Score



US data; 368 consumers; see Tennyson 2011

Agents as Information Source?



US data; 368 consumers; see Tennyson 2011

Regulations on Information Quality

- Product regulations
 - Content and form restrictions
 - Disclosure requirements
- Agent regulations
 - Fee arrangements
 - Disclosures of conflicts
 - Restrictions on information/illustrations
 - Licensing and registration
 - Professional liability

Insurance Regulation under EU

- Fundamental goal of EU standardization is open markets: homogeneous rules throughout the EU
- Eliminated rate regulation and content regulation of most insurance products
 - EU's Third Generation Insurance Directive (1994)
- Imposed uniform agent licensing requirements
 - EU Directive on Insurance Mediation (2002)

EU Changes to German Insurance

- Prior to EU, regulatory prior approval of product forms was mandatory in personal lines of insurance.
 - High level of product standardization and limited competition, albeit one with also a high level of transparency
- Prior to EU, there were no professional requirements for agents and brokers
 - Large number of agents, including part-time and casual agents, and information quality was low

Agent Licensing Requirements

- Entry requirements
 - Must provide proof of insurance expertise by passing a licensing test
 - Licensing information entered in the trade register
 - Must obtain professional liability insurance
 - Must have a good repute – no crime in past 5 years
 - Must be in solid financial condition – no insolvency proceedings ongoing

Agent Licensing Requirements

- Behavioral standards
 - Must provide information about their license, their relationships with insurance companies and about consumers' rights under insurance contracts.
 - The customer's desires and needs must be taken into consideration when providing advice.
 - Advice must be given concerning the specifics of individual products.
 - Recommendations must be based on a sufficient number of insurance products, with independent agents required to provide a broader choice set than exclusive agents who only work for one company.
 - The entire process must be documented.

Impact on Agent Market

- Total number of agents fell from 400,000 in 2007 to 244,000 in 2009
 - Impact at one insurer:
-

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|-------|-------|-------|-------|-------|-------|-------|
| Number of all Agents | 2,273 | 2,502 | 2,644 | 2,843 | 1,399 | 1,151 | 1,037 |
| Number of all Exclusive Agents (EAs) | 1,935 | 2,121 | 2,223 | 2,388 | 994 | 805 | 742 |
| Professional | 1,453 | 1,610 | 1,691 | 1,852 | 491 | 436 | 387 |
| Office-worker | 482 | 511 | 532 | 536 | 503 | 369 | 355 |

Did Agent Quality Improve?

- Preliminary evidence using customer cancellations suggests agent advice quality increases due to the regulations
 - Pre-regulation early cancellation rates were higher for exiting agents [sorting effect]
 - Post-regulation early cancellation rates of remaining agents decreases relative to rates in pre-regulation period and relative to rates of direct selling channel [incentive effect]

Response to Product Deregulation

- Rise of an “information market”
 - Independent product quality ratings provided by private firms
 - most important private agencies are Morgen & Morgen and Franke & Bornberg
 - these agencies grew out of insurance brokerage firms
 - ratings are largely targeted to insurance sales channels
 - rating products are accompanied by databases and software solutions provided to assist brokers in product comparisons

| Verbal descriptions of ratings | M & M | F & B | Finanztest |
|---|-------|------------|------------|
| excellent / outstanding / very good | ***** | FFF FF+ | 0.5 - 1.5 |
| very good / good | **** | FF | 1.6 - 2.5 |
| average / satisfactory / still satisfactory | *** | FF- F+ | 2.6 - 3.5 |
| weak / sufficient | ** | F F- | 3.6 - 4.5 |
| very weak / unsatisfactory | * | F-- | 4.5 - 5.5 |

Can Ratings Protect Consumers?

- Rating market governance:
 - Product rating market does not have problematic characteristics of the US credit rating market
- Specifically:
 - Rating agencies each rate all products
 - Insurer does not pay to generate the rating
 - Main customers for insurance product ratings are agents and brokers
 - Main consulting clients of the private rating agencies are insurance brokers and agents
- And: Intermediary regulations create agent incentives to provide consumers with data

| | Finanztest 2013 | Morgen & Morgen 2013 | Finanztest 2013 | Franke & Bornberg 2013* |
|--|--------------------|----------------------------|--------------------|-------------------------------|
| Common observations | 67 | | | 65 |
| Mean rating | 4.716 | 4.403 | 4.692 | 4.708 |
| Std.Dev. rating | 0.598 | 0.818 | 0.635 | 0.458 |
| Minimum rating | 3 | 2 | 3 | 4 |
| Maximum rating | 5 | 5 | 5 | 5 |
| Percent of ratings = 5 | 79.10 | 59.70 | 78.34 | 70.77 |
| Pct of equal ratings | 67.16 | | | 69.23 |
| Pct of government ratings exceeding private ratings | 29.85 | | | 16.92 |
| Pct of private ratings exceeding government ratings | 2.99 | | | 13.85 |

Discussion

- Under some market conditions a useful private market for product ratings may arise in the absence of government product regulations.
- Professional agent/broker segment is an important supporting feature for this information market
- Existence of government ratings may also be an important supporting feature

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PRODUCT RATINGS AS A MARKET REACTION TO Deregulation: EVIDENCE FROM THE GERMAN INSURANCE MARKET

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ABSTRACT

This study provides the first investigation of information markets as a reaction to deregulation of product forms in insurance markets. The article studies the case of Germany, where insurance product ratings entered the market after relaxation of product regulation in 1994. The ratings' potential for enhancing the performance of a deregulated insurance market is analyzed by considering both market structure and governance characteristics of the rating market, since the theoretical literature predicts that both are important determinants of rating outcomes. Data from a unique panel data set containing disability insurance ratings from the three major rating agencies are also examined in light of theoretical predictions. Results suggest that market governance and competition characteristics are favorable for the production of unbiased and informative ratings. Ratings for disability insurance support this interpretation, since the characteristics of the ratings conform to theoretical predictions about ratings in well-functioning rating markets.

INTRODUCTION

Due to concerns that information asymmetries and contract complexity may limit consumers' ability to evaluate insurance contracts, the content and form of personal insurance contracts are subject to prior approval regulation in many countries. Statistics from the International Association of Insurance Supervisors (IAIS) reveal that 80 percent of reporting countries mandate specific policy content in at least some lines of property-liability insurance, and 40 percent do so in life insurance lines. In both property-liability and life insurance, about one-half of the countries require regulatory prior approval of policy forms prior to market launch.¹ IAIS statistics also suggest that the pattern of cross-country regulatory differences reflect philosophical differences and not just differences in market development or consumer education. For example, regulatory prior approval

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¹ Data are reported in Tennyson (2011b) and are derived from statistics compiled by the IAIS.

of products is widespread among the U.S. states, but countries of the European Union (EU) eliminated regulation of most insurance product forms in 1994.²

Critics of insurance product form regulations argue that prior approval requirements delay product innovations and reduce product variety, limiting competition and consumer choice in insurance markets (Butler, 2002). On the other hand, survey research suggests that many consumers do not understand insurance policy language and terms (National Association of Insurance Commissioners [NAIC], 2010; Organisation for Economic Co-operation and Development [OECD], 2008; Tennyson, 2011a), and that most consumers do not read insurance policy disclosures (Cude, 2005). Some observers argue that if consumers cannot or do not effectively compare products, regulatory protections may lead to better market outcomes in practice, even if theory would suggest otherwise (Trebilcock, 2003; Schwarcz, 2010; Klemperer, 1999). Others note that product regulations may support more effective consumer search and decision making, since consumers will need less information to make informed choices (Grace and Scott, 2009).

The differing public policy perspectives and international variation in regulations raise interesting questions about the need for product regulations, and about the functioning of insurance markets where such regulations are not imposed. To provide insight into these questions, this article studies the case of product information in German insurance markets after the 1994 EU Insurance Directives. The research documents an interesting private market response to product deregulation—the rise of independent product ratings—and analyzes the potential for this market to provide insurance consumers with reliable quality information. In doing so, the study contributes to the ongoing debate on changes in regulatory design in other insurance markets by providing the first analysis of rating markets as a possible reaction to product deregulation in the insurance context. This outline of the product rating market's structure and performance provides basic insights on which to base further research in this field.

Our findings show that conditions in the German product rating market are conducive to the provision of useful information for consumers. We further document that the ratings provided for one important product line in personal insurance (disability insurance) are not characterized by the upward biases and opacity that can occur when rating markets do not function well. These findings provide support for the idea that the private market for product ratings may enhance the functioning of the deregulated insurance markets in Germany.

The remainder of the article is structured as follows. The second section summarizes product-related insurance regulation in Germany before and after the reforms in 1994. The third section reviews the theoretical and empirical literatures on private rating markets in order to identify drivers of rating quality in such markets. The fourth section describes the German market for insurance product ratings that developed after 1994. The fifth section presents the first empirical evidence on German insurance product ratings, using a hand-collected data set of product ratings for disability insurance. The sixth section discusses the prospects for reliable and unbiased product ratings in Germany, applying the academic literature on rating markets to the German insurance context.

² These changes occurred when the EU's Third Generation Insurance Directives were adopted.

The final section of the article summarizes the findings and their potential applicability to other insurance markets.

BACKGROUND

Prior to the EU's Third Generation Insurance Directives in 1994, products in Germany and many other European insurance markets were closely regulated (Eling et al., 2009; Berry-Stölzle and Born, 2012). In Germany, regulatory prior approval of product's forms was mandatory in personal lines of insurance. Product details were not only inspected for legality but also for compatibility with regulatory objectives, especially the protection of consumers' interests (Hoffmann, 1998; Rabe, 1997). Such oversight was considered the best form of regulation to reconcile the interests of insurers and consumers as well as to achieve a high level of market transparency.

However, mandatory prior approval inhibited incentives for investments in product development. Although regulatory authorities did not explicitly enjoin new product designs, the need to fulfill the requirements derived from the German Insurance Supervision Act made the decision to launch an innovative product a risky and costly strategy compared to simply following the market.³ The lengthy approval process and the risk of a particular product being rejected by the regulator could be avoided if insurers simply used the sample policy forms developed by the Gesamtverband der Deutschen Versicherungswirtschaft e.V. (GDV), an association that represents the interests of German insurers. As a result, highly standardized products dominated the German insurance market (Rabe, 1997; Eggerstedt, 1987). Products were similar or even identical within each line of insurance and there was little room for quality competition between insurers.

As a result, the regulated German insurance market was characterized by a high level of product standardization and limited competition, albeit one with also a high level of transparency. With the implementation of the Third EU Directives⁴ into national law, the insurance product landscape in Germany changed remarkably. Häfele et al. (2000) describes the consequences as a substantial increase in the variety of insurance products and a noticeable growth in competition over product quality, service factors, and prices.⁵ Life insurance companies became particularly active in designing new products and providing new services (Trigo Gamarra, 2008).⁶

While there are many positive effects of increased competition, decreased market transparency is one negative and unintended consequence. Greater product variety confronts consumers with a higher degree of quality uncertainty. Akerlof (1970) describes the

³ For more details on the approval process and the criteria checked therein, see Berry-Stoelzle and Born (2012).

⁴ The EU Directives 92/49/EWG (for nonlife insurance) and 92/96/EWG (for life insurance) were implemented by the "Drittes Gesetz zur Durchführung versicherungsrechtlicher Richtlinien des Rates der Europäischen Gemeinschaften" of July 1994 (The Council of the European Communities, 1992).

⁵ Auto insurance was the first line of business to compete via prices (Rees and Kessner, 1999). Insurance pricing also became more closely linked to individual risk and cost situations, and to insurers' strategic objectives (Farny, 1999; Everling, 2004). See also Schulz (2005).

⁶ Unit-linked life insurance products and variable annuity products are two of the best examples of innovations in the German market through the adoption of foreign concepts.

consequences of quality uncertainty, which in the worst-case scenario can lead to reductions in average quality and a shrinking in market size as consumers reduce their demand for the products. Even if the worst case does not arise, product diversity accompanied by high quality uncertainty may reduce social welfare due to high search costs, choice of poor or inappropriate products, and consumer dissatisfaction arising from lack of sufficient information on which to base decisions (Grace and Scott, 2009).

The strict forms of product regulation in Germany before 1994 explicitly tried to avoid the problems associated with consumers' quality uncertainty. In the absence of regulation, some new private or public sector mechanism is needed to address these problems. Drabbe (1994) predicted the formation of an "information market" as a direct consequence of the European reforms, and suggested that the public media, sales channels, and consumer protection authorities would be likely providers of information.

Beyond the providers of information Drabbe (1994) imagined, private rating agencies began to play an equally important role. Private rating agencies started to offer quality certification of insurance products shortly after deregulation. Insurers and sales channels quickly adopted these quality ratings to signal their products' quality, often displaying the ratings and rating seals of the rating agencies in their advertising and on their websites. Consumers and insurance agents and brokers began to use the ratings in making insurance choices. By 1997, one survey found that 72 percent of life insurance consumers indicated they would be likely to consult ratings to compare quality before choosing an insurance provider (Romeike, 2004).⁷ A more recent survey continues to show high levels of consumer awareness and trust of insurance product ratings, and moderate levels of use (Assekurata, 2006). According to this same survey, 96.4 percent of insurance brokers rank good product ratings as an important criterion for giving advice to customers.

CAN PRIVATE RATINGS PROTECT CONSUMERS?

German participants perceive that the market for insurance product ratings functions well. The vast majority of customers (74 percent) and brokers (78 percent) agree when asked if they trust in ratings. Interestingly, an even higher percentage of insurers (79 percent) state that they trust in the ratings. A majority of respondents in all of the groups consulted in the study (customers, brokers, and insurers) also state that they consider product ratings to be an important or very important choice criterion (Assekurata, 2006).

Nonetheless, results from the large academic literature on quality certification markets suggest reasons to be cautious about the value of private product ratings. From a public policy perspective, the growing evidence that the credit rating agencies issued upwardly biased ratings in the period leading up to the financial crisis (Griffin and Tang, 2011) should raise concerns about consumer reliance on private product ratings. In a recent review of the literature, Dranove and Jin (2010) identify three central economic questions regarding rating markets:

1. Will ratings be informative, that is, precise and unbiased?

⁷ The survey was undertaken by Swiss Re. Unfortunately the author does not provide exact information regarding the survey responses or for which specific type of ratings they apply.

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2. Does the source of payment for ratings affect rating quality?
 3. Does competition in the rating market affect rating quality?

These authors' review of the theoretical and empirical literature on these questions concludes that the quality of ratings will be affected by payment source and competition, and that the effects depend on the entire set of governance relationships between rating companies, rated companies, and consumers of ratings. Governance relationships are important because they determine the strength of market discipline to provide raters with incentives to produce accurate and unbiased ratings; these relationships also may (or may not) create conflicts of interest which undermine such incentives for raters.

When rated companies solicit and pay for ratings, theory demonstrates that a monopoly rater will earn higher profits if ratings do not cover all companies in the market and are structured to provide only coarse indicators of quality (Lizzeri, 1999; Doherty et al., 2012). This provides incentives for entry, and a new entrant into the market will compete by adopting a more precise rating scale and stricter rating standards (Doherty et al., 2012; Jiang et al., 2012). Competition over rating criteria will improve the quality of ratings. However, if multiple entrants permit rated companies to shop among raters, this can lead to upward bias in ratings (Farhi et al., 2008).

The empirical literature posits and confirms a variety of forces leading to upward bias in ratings when the rated company solicits and pays for the rating. These include increased market share (Hubbard, 1998), future cooperation or favor from rated companies (Lim, 2001; Waguespack and Sorenson, 2010), career concerns of individual raters (Hong and Kubick, 2003), and capture or collusion (Michaely and Womack, 1999). Moreover, increases in competition do not always improve rating accuracy (Becker and Milbourn, 2008). Bolton et al. (2012) show that the strength of market discipline is important in reducing rating bias, with ratings more likely to be inflated when the users of ratings are naïve or have little incentive to penalize producers of biased ratings. In this regard, many observers note that the use of credit ratings solely as evidence of meeting minimum fiduciary or regulatory standards is a likely cause of inflated credit ratings prior to the financial crisis (White, 2010).

In many circumstances, obtaining payment for ratings from the users of the ratings rather than from product sellers will eliminate incentives for upwardly biased ratings; however, this may not be a sustainable business model if rating information can be shared among users or if nonpayers can infer ratings from market data (Durbin, 2001). Jiang et al. (2012) document that Standard & Poor's (S&P) 1970s switch of its bond rating business from user payments to issuer payments was driven by profitability concerns. Their study also demonstrates that S&P's ratings increased significantly and were closer to those of other raters after the switch to the issuer-pays business model.

In some markets, quality ratings are provided by government rating agencies rather than by private profit-seeking raters. Government raters do not face financial incentives to produce upwardly biased ratings, but the lack of financial incentives may reduce rating effort and thus rating quality (Dranove and Jin, 2010). In markets such as banking which have both government and private raters, Berger et al. (2000) find that both sets of raters obtain information from the other, which may improve rating accuracy.

Overall, the academic literature on rating markets has identified potentially important conflicts of interest within rating agencies when the rated company chooses its rating agency and pays for the rating (Strier, 2008). Such conflicts are especially likely if the rating agency provides multiple services to the rated company, which makes other business relationships potentially dependent on favorable product ratings, or if the rating agency engages in other business activities that profit from high product ratings (Bolton et al., 2012; Bar-Isaac and Shapiro, 2011; Skreta and Veldkamp, 2009). Competition among raters is expected to improve rating accuracy, but only if competition occurs over rating methods or rating criteria in addition to price, and if competition does not induce shopping for (favorable) ratings.

In the remaining sections of the article, we describe the German insurance product rating market and the business models of the rating agencies, in relation to characteristics that the academic literature identifies as important determinants of rating market performance. We also present summary data and comparisons of ratings across different rating agencies, in relation to predictions of the literature. While this analysis falls short of a robust empirical test of market performance, it does shed light on whether conditions in the market are conducive to the provision of accurate and unbiased product ratings.

THE GERMAN LANDSCAPE FOR INSURANCE PRODUCT RATINGS

The Rating Industry

Systematic insurance product comparisons in Germany did not originate with the deregulation in 1994, but had existed since the 1970s when the magazine *Capital* started to evaluate life insurance policies (Powelet, 2010). However, meaningful comparisons of products could not prevail in the strictly regulated market in which there were few product differences, and these early comparisons were mainly restricted to the premium component (Sönnichsen, 1992). The first product ratings as they are known today appeared during the early years after deregulation.

The insurance product rating industry in Germany has been developing since deregulation and is currently populated by a handful of small rating agencies.⁸ While no data on market shares or revenues are available, surveys of insurers and brokers consistently show that the most important private agencies are Morgen & Morgen GmbH and Franke & Bornberg GmbH (Assekurata, 2006; Hülsken, 2010). Both of these agencies grew out of insurance brokerage firms, and the ratings of both agencies are largely targeted to insurance sales channels. Their rating products are accompanied by databases and software

⁸ The first ratings that went beyond comparing insurance products by the levels of premiums or benefits were published in 1995, the year after deregulation. Franke & Bornberg GmbH was the first to provide a rating for occupational disability insurance; these were shortly followed by the initial ratings of Morgen & Morgen GmbH and Stiftung Warentest. The German market for insurance product ratings can definitely be seen as initiated by deregulation when observing the entry dates of the few rating agencies on the market: Franke & Bornberg GmbH entered in 1990 and published its first rating in 1995; Morgen & Morgen GmbH entered in 1989 and published its first rating in 1996. Other raters and their entry dates include Rating Sieger (2000, since 2008 called Risiko & Vorsorge), Institut für Vorsorge und Finanzplanung (2001), infinma Institut für Finanz-Markt-Analyse (2003), Deutsches Institut für Servicequalität (2006), and Softfair Analyse GmbH (2011).

solutions provided to assist brokers in product comparisons. Nonetheless, consumers may also see these companies' ratings in magazines that cooperate with the agencies to publish their ratings.

A third important player in the rating market is Stiftung Warentest. Stiftung Warentest is a government rating agency whose ratings are specifically targeted to consumers.⁹ The agency was created by the German parliament in 1964 with the objective of enhancing consumer protection. Stiftung Warentest initially focused on consumer product testing, with results and ratings published in a monthly magazine called *test*. The agency began comparing and rating insurance products in 1991, and publishes these ratings in its magazine *Finanztest*.¹⁰ Hence, these ratings are commonly called Finanztest ratings.

Product ratings exist for all types of insurance products, but the widest variety exists for life insurance products (Remmert, 2005). Morgen & Morgen provides product ratings for occupational disability insurance (since 1996), health insurance (since 2006), nursing care pension (since 2011), and daily nursing care allowance insurance (since 2012). Its most widely regarded product rating is for occupational disability insurance, which is updated once per year. The most recent rating update, which was published in April 2013, evaluates the quality of 356 insurance products provided by 75 different insurance companies.¹¹ The German Financial Supervisory Authority (BaFin) lists a total of 92 life insurance companies under its supervision, and 73 of them provide occupational disability insurance products.¹² All of these insurers are included in the 2013 Morgen & Morgen rating. Companies beyond that are either foreign companies providing occupational insurance products in Germany, or smaller insurers with regionally limited product provision that are supervised by state authorities. All current ratings of Morgen & Morgen except for the health insurance product ratings are available on the agency's website.

Franke & Bornberg offers ratings for every line of private insurance, and its ratings cover most but not all companies in the market. Thus, for example, as of April 2013 the website of Franke & Bornberg contained 280 single ratings for occupational disability insurance issued by 71 different life insurance companies.¹³ For property–casualty insurance lines, Franke & Bornberg provides ratings for content insurance (since 2010) and homeowners'

⁹ According to its website (www.test.de), Stiftung Warentest is recognized by 94 percent of German customers, from which one-third base their purchase decisions on its test results (accessed May 3, 2013).

¹⁰ Finanztest provides tests not only for insurance products but also for other financial services products.

¹¹ This number does not include two consortiums of insurers, which collaborate in order to offer occupational disability insurance products for specific occupation groups. Morgen & Morgen includes them in its ratings too.

¹² These numbers are taken from the company database provided online by the German Financial Supervisory Authority (Bundesamt für Finanzdienstleistungsaufsicht [BaFin]).

¹³ The original list contains 4,380 different ratings. This enormous number of ratings results from the very high degree of differentiation between product variants. Franke & Bornberg assigns separate ratings for every individual product variant a customer could choose by combining different product options, for example, different waiting periods between materialization of the risk and the initial annuity payment. Moreover, since occupational disability insurance products are often provided as complementary insurance to other life insurance products,

insurance (since 2012), as well as for casualty insurance. Ratings are updated at irregular intervals as needed, for example, when tariff features are modified by the insurers. All ratings appear on the company's website.¹⁴

The government agency Stiftung Warentest provides the greatest variety of insurance product comparisons, which are published in its magazine *Finanztest*. *Finanztest* offers comparisons of insurance products for every line of business, and for every specific type of product within each insurance line. However, *Finanztest* does not usually publish assessments of the entire market for a product. Ratings are instead typically displayed as lists of the highest-scoring products or rankings of selected products within a detailed article on a product line. Its ratings do not follow specific update schemes and are sometimes focused only on selected quality aspects of a product line.

Rating Models

Product ratings, which can also be considered as third-party quality certificates for insurance products, are defined as "... a result of the appraisal of economic issues, represented by non-numerical symbols. It must be updated as the appraised object or the circumstances change and must allow a classification of the rated objects on ordinal scale" (Sönnichsen, 1992).¹⁵ Consequently an important delimitation should be made: a rating is understood as an outcome of an assessment. The assessment itself is referred to as the rating process.

In any rating market, important distinctions between ratings may arise due to differences in the nature of information used to produce the rating (Sönnichsen, 1992, 2005; Romeike, 2004; Dambacher and Gatzert, 2011). A rating may rely solely on public information (so-called PI rating) or may additionally utilize internal information of the rated company (so-called interactive rating). Although a mix of rating models is used in the German market for insurance product ratings, PI ratings are common practice.¹⁶

Franke & Bornberg awards separate ratings for every single core plan that disability insurance could attach to, although it states that the rating does not include evaluation of the quality of the core plan. None of these reasons for ratings differentiation lead to systematic differences in the resulting ratings. Restricting focus to the number of distinct occupational disability insurance products assessed by Franke & Bornberg, there are 280 ratings in total.

¹⁴ Morgen & Morgen and Franke & Bornberg additionally offer company ratings for life and health insurance. These ratings are not financial strength ratings but aim to assess the insurer's quality as providers of these long-term products by consulting ratios like acquisition costs or termination rates.

¹⁵ From German: "Ein Rating ist das Ergebnis einer Bewertung wirtschaftlicher Sachverhalte, das durch nicht-numerische Symbole dargestellt wird und durch eine der Änderungsdynamik der zugrunde-liegenden Sachverhalte entsprechenden, periodischen Aktualisierung jederzeit eine Klassifikation der be-trachteten Sachverhalte durch einen Entscheidungsträger, der nicht der Produzent des Ratings ist, mit ordinalem Skalenniveau zuläßt."

¹⁶ Note that unsolicited ratings may still rely on internal data from insurance companies. If a company refuses to provide the requested information the respective part of the rating is usually valued at zero. The rating scheme of the Morgen & Morgen rating for occupational disability insurance products can serve as an example for interactive but unsolicited ratings.

Morgen & Morgen. The Morgen & Morgen ratings are expressed on a scale of one to 5 stars, where the number of stars is ascending with product quality. Inputs and rating models vary across products. Morgen & Morgen is best known for its ratings of occupational disability insurance, which appear once a year. Although they have evolved over time, the current disability insurance ratings are based on a weighted average of four subratings: the product terms and conditions (50 percent), insurer expertise (30 percent), insurer financial solidity (10 percent), and application questions (10 percent). This rating is one of the rare interactive ratings, for which the rating agency receives internal data from the insurers.¹⁷ These internal data flow into the subrating on insurer expertise. Companies that refuse to participate by providing data receive a score of zero in that subrating.

The Morgen & Morgen ratings for nursing care pension and daily nursing care allowance do not follow periodic updating schemes but are updated regularly according to the agency. These two ratings are PI ratings investigating product quality based on 39 questions that focus on the products' terms and conditions. The health insurance rating has a special focus on premium stability, which is an essential quality feature of private health insurance in Germany.¹⁸ It assesses product quality by three premium-related statistics, which are the relative increase in premiums, the standard deviation of this measure, and the absolute increase of premiums.

Franke & Bornberg. Franke & Bornberg uses a rating scale similar to those used in financial strength or credit ratings. The ratings are based on the capital letter F and scaled from a low of F– to a high of FFF, with the complete scale encompassing F–, F–, F, F+, FF–, FF, FF+, to FFF.¹⁹ This rating agency conducts solely PI ratings with a primary focus on the quality of product terms and conditions.²⁰ Its ratings for occupational disability insurance, annuity insurance, health insurance, casualty insurance, and homeowners insurance are examples of purely conditions-based ratings. In its home content insurance ratings, Franke & Bornberg includes consideration of portfolio and risk-related figures such as the number of contracts, solvency ratio, or the combined ratio to measure the sustainability aspects of product offerings.

Finanztest. The Finanztest rating is derived from grades varying in deciles and declining with product quality from 5.5 to 0.5. To support readability in its publications, these

¹⁷ As examples of internal data, Morgen & Morgen mentions figures about the constitution of the insured portfolio and claim figures.

¹⁸ Price components are a strong dimension of competition for private health insurance products in Germany as insurers are required to provide a uniform scope of service (§12 No 1b of the German Insurance Control Act). This law applies to all full health insurance contracts that serve as substitutes to statutory health insurance. New products or product modifications are required to be announced to the regulator. Nevertheless, there is still room for differences in product terms and conditions, which helps to explain the Franke & Bornberg approach to health insurance rating.

¹⁹ Franke & Bornberg indicates when the insurer offering a rated product has received the best company rating by supplementing the word PLUS to its product ratings.

²⁰ In fact, on the homepage of Franke & Bornberg's website (www.frankeundbornberg.de), the agency advertises itself as the "translator of insurance conditions" (accessed April 29, 2013).

grades are clustered in five groups to provide evaluations as they are *very good, good, satisfactory, sufficient, and unsatisfactory*.

In addition to assessing a product's quality based on contractual design of terms and conditions, Finanztest attaches great importance to performance components. Hence, its ratings often take into account statements about guaranteed and forecasted benefits. Although all ratings are solely PI ratings, Stiftung Warentest sometimes does not rate the products of insurers that refuse to provide the requested data needed to construct ratings.

QUALITY RATINGS FOR DISABILITY INSURANCE

We provide herein some objective data to describe the rating market in more detail, by reporting statistics on a hand-collected data set of product ratings. The data cover a subset of product ratings issued by the private agencies Morgen & Morgen, Franke & Bornberg, and the government rating agency Finanztest. Although sufficient data are not available to provide a rigorous test of rating quality and reliability, exploring similarities and differences in ratings within and between rating agencies can provide suggestive evidence on the performance of the product rating market.

We use as an example the product ratings provided for occupational disability insurance products sold by life insurance companies. This is an important market for private insurance because the German social security system does not cover the financial risk associated with losing the ability to practice one's profession.²¹ As a consequence, the market for occupational disability insurance is extremely competitive and an important focus of the rating agencies.

The Ratings

Figure 1 displays the distribution of ratings for occupational disability products from Morgen & Morgen for the years 2001 through 2013.²² This example is restricted to Morgen & Morgen data because this is the only rating agency that provides data on historical ratings for the entire market. The figure shows a great deal of variation in product ratings within each year—with the entire range of “star” values represented in every year. The percentage of products receiving the highest rating also varies greatly over time, ranging from a high of 53 percent in 2003 to a low of 18 percent in the very next year (2004).²³ On average, over this time period only 36 percent of occupational disability products receive a 5-star rating from Morgen & Morgen. The median (50th percentile) product rating is 5 stars in years 2002–2003; 4 stars in years 2001, 2004–2005, and 2009–2013; and 3 stars in years 2006–2008. These data show that the ratings cover the full range of ratings values, and discriminate between products.

We also display data on Franke & Bornberg ratings, but the statistics are restricted to ratings for 2013 because these are the only data available to us. An important feature

²¹ Social security reform legislation, which passed in 2001, privatizes this risk.

²² Franke & Bornberg provides access to only its current ratings, and Finanztest data are limited because the agency rates only selected products.

²³ This shift can be explained by a change in Morgen & Morgen's rating system. Until 2003 it only rated by assessing the quality of a product's terms and conditions. From 2004 on it introduced its current rating system relying on different subratings.

FIGURE 1

Distribution of Disability Product Ratings From Morgen & Morgen

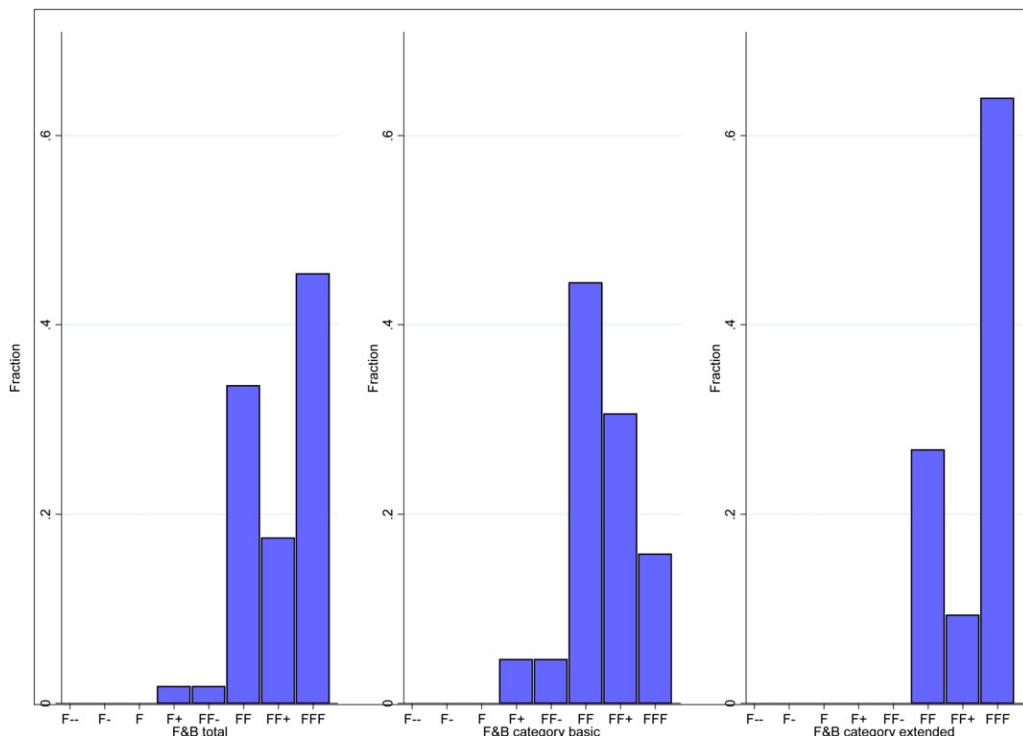


of the Franke & Bornberg disability product ratings is the categorization of products as “basic” or “extended.” The rating agency explains the categorization as a reaction to negative effects of rating-initiated product development: in the early 2000s it noticed the tendency for insurers to implement cost-intensive product features just for the purpose of enhancing product ratings. Lower-cost products, which might nonetheless provide a sufficient level of protection for many consumers, were not able to achieve ratings that acknowledged their good quality. Beginning with ratings in 2002–2003, the company introduced the “basic” and “extended” product categories to allow for good ratings for each of the two different coverage tiers (Franke & Bornberg, 2008). Thus, categorization is used to first provide information on which products are most comparable, before rating values are applied to comparable products.

The distribution of 2013 disability product ratings—in total and for basic and extended products separately—are displayed in Figure 2. The ratings are concentrated on the highest 5 of the 8-point rating scale when rated products are considered in total (top left chart in figure): 127 out of 280 products received the highest rating, which sums up to a share of 45 percent, whereas ratings in the second highest class account for 17.5 percent of products followed by 34 percent in the third highest class.

This concentration in the rating values results from the subdivision into the two categories “basic” and “extended,” which has the effect of shifting the raw rating numbers upward. As intended by categorization, products assessed in the “basic” category are more likely to receive higher ratings than they would without the categorization. As illustrated in the second and third charts in Figure 2, which show the distribution of ratings for basic and extended products separately, extended products are more likely to receive the highest rating while the most prevalent rating for basic products is the third highest rating. Because the products designed as cheaper alternatives to the more costly premium products are rated separately in the “basic” category, the products incorporated in the “extended” category are by some measure of higher quality by definition.

FIGURE 2
Distribution of Franke & Bornberg Ratings



Nonetheless, not all basic products receive lower ratings than extended products. Thus, the separate categories permit greater quality discrimination between similar products.

Figure 3 compares the distribution of product ratings by Franke & Bornberg to the distribution of Morgen & Morgen ratings for the same products. To provide a meaningful comparison, each rated product is assigned to the “basic” or “extended” category used by Franke & Bornberg. The comparison shows great similarity across the two agencies in the ratings of “extended” products, but great differences for the “basic” product ratings. Whereas the Morgen & Morgen ratings for the “basic” products are roughly normally distributed over the whole range of its 5-point scale, the Franke & Bornberg ratings are concentrated in its three highest rating classes. This further demonstrates how the separate categories permit Franke & Bornberg to provide higher ratings to lower-cost products.

Ratings Comparisons

Beyond examining the overall distribution of ratings, we wish to compare the ratings of individual products provided by the different raters. To achieve this we compare ratings values of products that are rated by both of the private rating agencies, and ratings of products by the private agencies and those given by Finanztest (the government

FIGURE 3

Distribution of Ratings by Category

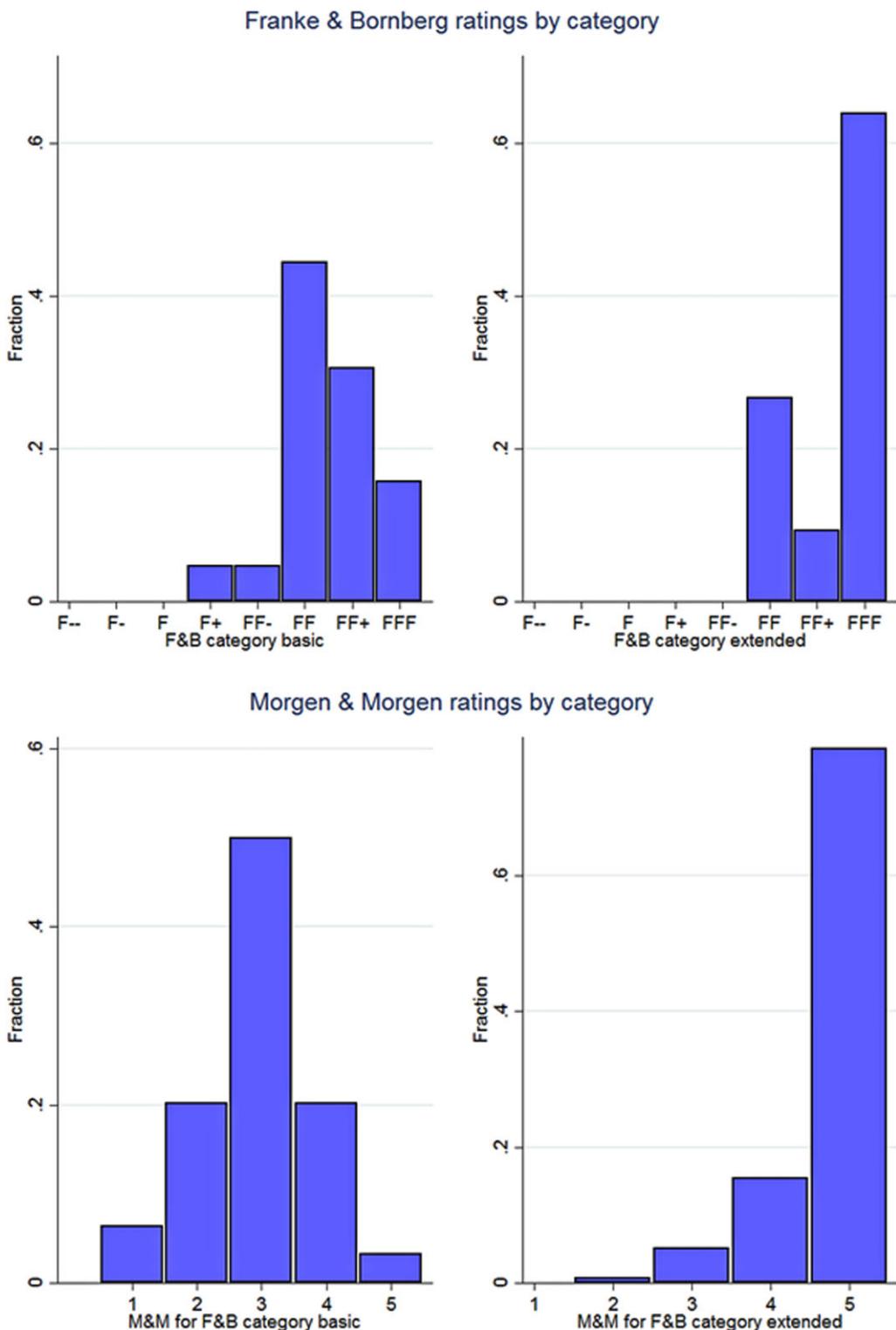


TABLE 1
Common Scale Constructed for Rating Comparisons

| Verbal Descriptions of Ratings | CAT5 | M&M | F&B | Finanztest |
|---|------|-------|------------|------------|
| Excellent/outstanding/very good | 5 | ***** | FFF FF+ | 0.5–1.5 |
| Very good ^a /good | 4 | **** | FF | 1.6–2.5 |
| Average/satisfactory/still satisfactory | 3 | *** | FF– F+ | 2.6–3.5 |
| Weak/sufficient | 2 | ** | F F– | 3.6–4.5 |
| Very weak/unsatisfactory | 1 | * | F– | 4.5–5.5 |

Note: CAT5 = numerical scale ranging from 1 (very weak) to 5 (excellent); M&M = Morgen & Morgen; F&B = Franke & Bornberg.

^aBoth of the rating agencies use 5-point scales for their ratings. Therefore, the assignment to the CAT5 scale followed their numerical assignment. The rating designation “very good” is used twice as it is assigned to the highest Finanztest rating as well as to the second highest Morgen & Morgen rating.

agency). Before presenting these comparisons we first explain adjustments that are made to overcome two differences in the ratings reported by the different raters.

The first adjustment accounts for differences in the product rating scales. Both Finanztest ratings and Morgen & Morgen ratings use a 5-point scale, whereas Franke & Bornberg ratings are based on an 8-point scale. To allow direct comparison of the ratings, we follow studies of financial rating comparability (e.g., Pottier and Sommer, 1999) by using the verbal descriptions of the rating outcomes to create a common scale. As shown in Table 1, we construct a single numerical scale (CAT5)—from 1 (very weak) to 5 (excellent)—for use in our comparisons.

The second adjustment accounts for the fact that the rating agencies do not always rate the same products. To deal with the differences, when comparing rating values for specific products, only those products rated by both of the comparison agencies can be compared. Because the private raters try to rate every product in the market, while there are some differences in the set of disability products rated by Morgen & Morgen and Franke & Bornberg, there is a great deal of overlap and many products receive ratings from both agencies. When comparing private ratings with government ratings, however, available comparisons are limited by the fact that Finanztest does not rate every product in the market. Finanztest ratings do not cover the entire market; they are targeted to high-quality products that are suitable for a broad target audience. Consequently, Finanztest ratings were published for only 54 occupational disability products in 2011 and for 74 products in 2013, all of which received ratings of satisfactory or above (i.e., ratings of 3 to 5 on a 1–5 point scale).

Table 2 compares the ratings of the two private rating agencies, Morgen & Morgen and Franke & Bornberg, using the 5-point rating scale we constructed to permit direct

TABLE 2
Comparison of Private Ratings

| | Comparison I | | Comparison II | | Comparison III | |
|---|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|
| | All Products | | Category "Basic" | | Category "Extended" | |
| Morgen & Morgen 2013 | Franke & Bornberg 2013 | Morgen & Morgen 2013 | Franke & Bornberg 2013 | Morgen & Morgen 2013 | Franke & Bornberg 2013 | Morgen & Morgen 2013 |
| Observations per agency | 356 | 280 | 94 | 108 | 155 | 172 |
| Common observations | 5 | 249 | 94 | 108 | 155 | 172 |
| Median rating | 4.048 | 5 | 3 | 4 | 5 | 5 |
| Mean rating | 4.614 | 4.614 | 2.936 | 4.372 | 4.723 | 4.761 |
| Std. dev. of ratings | 1.124 | 0.550 | 0.890 | 0.639 | 0.587 | 0.428 |
| Minimum rating | 1 | 3 | 1 | 3 | 2 | 4 |
| Maximum rating | 5 | 5 | 5 | 5 | 5 | 5 |
| Percent of ratings = 5 | 50.20 | 64.66 | 3.19 | 45.74 | 78.71 | 76.13 |
| Percent of equal ratings across raters | 53.01 | | 17.02 | | 74.84 | |
| Percentage of M&M ratings exceeding F&B ratings | 7.23 | | 0.00 | | 11.61 | |
| Percentage of F&B ratings exceeding M&M ratings | 39.76 | | 82.98 | | 13.55 | |

Note: M&M = Morgen & Morgen; F&B = Franke & Bornberg.

comparisons. The comparison focuses only on products rated by both of the rating agencies in 2013. The first column of the table compares ratings for all disability products rated by the two agencies; the second and third columns separately compare the ratings for products classified as “basic” and “extended” by Franke & Bornberg.

The table shows that there are 249 products commonly rated by both private agencies in 2013. These products are divided into 94 products rated in the Franke & Bornberg category “basic” and 155 assigned to the category “extended.” Whereas Morgen & Morgen spreads its ratings over the full 5-point rating scale, Franke & Bornberg ratings range from 3 to 5. Comparing ratings over all products, more than 50 percent of products receive the same rating by the two agencies. However, when there is ratings disagreement this is usually due to a higher rating from Frank & Bornberg. Almost 40 percent of Franke & Bornberg ratings exceed the Morgen & Morgen ratings when all products are considered together.

The data in the second column, which reports ratings for those products categorized as “basic” by Franke & Bornberg, illustrate once again that the differences in overall ratings can be traced back to this categorization. In the “basic” product category almost 46 percent of the products receive the highest rating (5) from Franke & Bornberg. In contrast, only 3 percent of these products receive a rating of 5 from Morgen & Morgen (which does not make the product category distinction).²⁴ More generally, Franke & Bornberg ratings exceed Morgen & Morgen ratings within this category for 83 percent of products.

Ratings of the two agencies are much more similar for products within Franke & Bornberg’s “extended” category. Within this category the ratings by the two private rating agencies are highly comparable in almost every statistic examined in the table. The two agencies provide identical ratings to nearly 75 percent of products in this category. The share of products that receive higher ratings by Morgen & Morgen is 12 percent, and a similar fraction of products (14 percent) receive higher ratings by Franke & Bornberg. One notable difference is in the minimum rating issued, which is 2 for Morgen & Morgen and 4 for Franke & Bornberg. However, this difference is less meaningful than it may first appear, since only one product receives a rating of 2 by Morgen & Morgen (0.65 percent of 155 ratings) and only 8 products (5 percent) receive a rating of 3.

Table 3 displays the comparison of private and government ratings, including only those products that were rated by both Finanztest and the private agency regarded in the comparison. The most recent Finanztest ratings available are from July 2011 and July 2013; Morgen & Morgen ratings for 2011 and 2013, as well as Franke & Bornberg ratings for 2013 are used in this comparison. The first column of the table compares Morgen & Morgen and Finanztest ratings in 2011, and the second compares the ratings for these two agencies in 2013. The third column of the table compares Franke & Bornberg ratings to Finanztest ratings in 2013.

²⁴ This high share of 46 percent highest ratings reduces to 13 percent when assigning the Franke & Bornbeg rating FF+ to the second highest rating class instead of to the highest class. Nonetheless, this still leads to a 10 percent point difference, which is indicative of an upward shift in Franke & Bornberg’s ratings for products classified as “basic.”

TABLE 3
Comparison of Public and Private Ratings

| | Comparison I | | Comparison II | | Comparison III | |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|-------|
| | Morgen & Morgen Finanztest 2011 | Morgen & Morgen Finanztest 2013 | Morgen & Morgen Finanztest 2013 | Morgen & Morgen Finanztest 2013 | Franke & Bornberg 2013 ^a | |
| Observations per agency | 54 | 344 | 74 | 356 | 74 | 280 |
| Common observations | 49 | 49 | 67 | 67 | 65 | 65 |
| Mean rating | 4.571 | 4.592 | 4.716 | 4.403 | 4.692 | 4.708 |
| Std. dev. rating | 0.574 | 0.500 | 0.598 | 0.818 | 0.635 | 0.458 |
| Median | 5 | 5 | 5 | 5 | 5 | 5 |
| Minimum rating | 4 | 3 | 3 | 2 | 3 | 4 |
| Maximum rating | 5 | 5 | 5 | 5 | 5 | 5 |
| Percent of ratings = 5 | 57.14 | 63.27 | 79.10 | 59.70 | 78.34 | 70.77 |
| Percentage of equal ratings across raters | 59.18 | 67.16 | 67.16 | 69.70 | 69.23 | 69.23 |
| Percentage of government ratings exceeding private ratings | 18.37 | 29.85 | 29.85 | 29.85 | 16.92 | 16.92 |
| Percentage of private ratings exceeding government ratings | 22.45 | 2.99 | 2.99 | 2.99 | 13.85 | 13.85 |

^aTakes the total of Franke & Bornberg ratings into account; without distinction of categories.

The table shows that there were 49 commonly rated products for Finanztest and Morgen & Morgen in 2011, and 67 in 2013. Finanztest and Franke & Bornberg rated 65 products in common in 2013 (where 12 products are in the “basic” category and 53 products are in the “extended” category). When using our constructed (1–5) common rating scale, Morgen & Morgen rating values for these products range from 3 to 5 in 2011 and from 2 to 5 in 2013. Finanztest ratings vary between 4 to 5 in 2011 and 3 to 5 in the year 2013, and Franke & Bornberg ratings range from 4 to 5. From 59 percent to 69 percent of the products in each comparison are rated the same by the private rater and Finanztest, and rating differences are both positive and negative.

The mean ratings of the private agencies and Finanztest are similar in all three comparisons.²⁵ Morgen & Morgen’s average rating was slightly higher than Finanztest’s in 2011, and both are slightly lower than Finanztest’s in 2013. Franke & Bornberg’s average rating is slightly higher than the government rating in 2013 when the upward shift caused by the Franke & Bornberg’s categorization system is not taken into account.²⁶ However, if the ratings are compared only for the commonly rated products assigned to the “extended” group by Franke & Bornberg the result reverses: with an average rating of 4.943, Finanztest rates these products higher than Franke & Bornberg, which provides an average rating of 4.792.

DISCUSSION

The organization of the insurance product rating market in Germany does not appear to subject the private rating agencies to conflicts of interest. Each rating agency determines the set of insurance products for which it provides ratings; product ratings are not solicited or paid for by the rated company. The only identifiable cash flow between the insurance companies and the private rating agencies in direct connection with the ratings are licensing payments for rating seals. These licensing payments from insurers to rating agencies permit the insurer to display the rating in its marketing materials. Insurers naturally tend to be more likely to invest in rating seals that attest to their product’s good quality; however, the rating seals are relatively inexpensive and the licensing of the seals is not the main revenue stream of most product raters.

The private rating agencies’ main customers for insurance product ratings are agents and brokers. The main consulting clients of the private rating agencies are also the insurance brokers and agents, not the insurance companies. Revenues from the publication of ratings, software licenses, and consulting to agents and brokers are the main sources of the private rating agencies’ revenues.²⁷ Thus, the financing of ratings is not marred by conflicts of interest that may lead to misdirection of ratings, nor are there obvious conflicts due to consulting relationships.

²⁵ Standard statistical tests confirm that the ratings distributions of the private agencies are similar to the ratings distribution of Finanztest, for the commonly rated products.

²⁶ This applies for the assignment of the original Franke & Bornberg category FF+ to CAT5 5 as outlined in Table 1. Franke & Bornberg average rating with 4.600 does not exceed the governmental rating of 4.692 when FF+ is assigned to CAT5 4 regardless of the Franke & Bornberg categorization.

²⁷ The statements on revenue structure are derived from the business mixes outlined by the rating agencies and are not based on revenue data (which are not available).

Consistent with this strong market governance, our comparisons of private ratings to government ratings show no evidence of upward bias in the private ratings for the case of disability insurance ratings. Finanztest and the private agencies are about equally likely to provide a product with the highest quality ratings, and the ratings of the private agencies are about equally likely to be higher and lower than Finanztest ratings when there is a rating disagreement. While this interpretation of the data is premised on the maintained hypothesis that there is no incentive for systematic rating overstatement by the government agency, that assumption is supported by the absence of financial incentives for Finanztest to provide high ratings²⁸ and is consistent with evidence from previous studies of government ratings (see Dranove and Jin, 2010).

Our descriptions of the rating models and rating values used by Morgen & Morgen and Franke & Bornberg also confirm that competition is present in the private rating market. Franke & Bornberg's introduction of "basic" and "extended" product categories and the use of eight rating levels as opposed to Morgen & Morgen's five levels introduce systematic differences between the two private rating systems. Since Morgen & Morgen was the first entrant and is the dominant player in the market, the more detailed ratings of Franke & Bornberg are consistent with both the predictions of theory and experiences in other rating markets (Doherty et al., 2012; Jin et al., 2010).

Unlike in other rating markets both private raters aim to rate all products, rather than targeting particular market segments. This is likely due to the fact that ratings are not solicited by insurers, but by agents and brokers who use ratings (and ratings software) to facilitate the matching of clients with products. The bundling of comparison software with the ratings, and the German regulatory environment that requires agents to document their provision of high-quality advice,²⁹ serves to support this business model in which the user pays for the ratings.

Rating independence requires raters to use different rating models, but rating reliability for consumers requires that similar products receive similar ratings from different raters. Thus, if the private rating market functions well, we expect to observe a strong but not perfect correlation between the ratings of different agencies for the same product. Once the rating system differences are accounted for, this pattern is observed in disability insurance ratings. When all commonly rated products are considered, ratings of the two private agencies are in agreement for 53 percent of products; when only commonly rated "extended" products are considered, ratings of the two agencies agree nearly 75 percent of the time.

²⁸ The purpose of the governmental foundation Stiftung Warentest outlined in its statutes reads as follows: "The foundation works selflessly; it does not primarily pursue its own financial interests. Purpose of the foundation is to foster consumer protection...." We consider that fact together with information about the marginal dimension of revenues through the sale of test seals, for which it solely charges handling fees, as supporting this hypothesis. Additionally, as Finanztest only rates a small fraction of products in the market, there is reason to believe that it has no strong interest in maximizing its profit through the sales of ratings.

²⁹ With implementation of the first EU Insurance Mediation Directive into national law in December 2006, the duty to document details on the advice to the customer became mandatory for every type of insurance intermediary.

Contrary to the theoretical predictions for issuer-paid ratings, however, Franke & Bornberg does not appear to impose more stringent rating standards. Among the commonly rated “extended” products for which the two agencies issue different ratings, the higher rating is slightly more likely to be from Franke & Bornberg (13.55 percent) than from Morgen & Morgen (11.61 percent). This divergence from other rating markets seems likely to be due to the user-pays business model in Germany. Because insurers do not solicit and pay for product ratings, Franke & Bornberg has no strategic motive to attract rating requests by offering companies a more informative signal to consumers.

CONCLUSIONS

This article has documented the rise of a private market for insurance product ratings in the aftermath of insurance product deregulation in Germany. Such a development illustrates the remarkable resilience of private markets in responding to consumer demand, even for intangible goods such as information. In many markets subjected to long traditions of restrictive consumer protections, regulators and market participants alike often lose sight of this capacity. Thus, the very existence of this information market provides an important case in point to regulators of insurance and other consumer markets.

Our research analyzes the characteristics of the German market for insurance product ratings in light of the theoretical literature on rating quality, and provides the first evaluation of the performance of this market. The results are consistent with our observation that the business models of the rating agencies shield them from obvious conflicts of interest that might undermine the accuracy of ratings. Competition among the private raters is clear; compared to government-issued ratings, there is no evidence of an upward bias in private ratings, and once rating system differences are accounted for, ratings appear sufficiently reliable to improve market transparency. Although our results must be viewed as preliminary and suggestive, the findings offer an encouraging view of the product rating market.

When evaluating the applicability of the German situation to other insurance markets, several points should be emphasized. The focus on producing ratings for sales intermediaries, and the receipt of payment from these users of the ratings rather than from the rated companies, is an essential feature of the rating market governance in Germany. Because nearly all products are rated and because insurers do not solicit and pay for ratings, concerns about insurers shopping among raters for favorable ratings are lessened.

While ultimately beneficial to consumers, it is the demand for rating information from sales intermediaries that supports the product rating market in Germany. This assures that rating accuracy is an important factor determining success for a rating agency in this market. Agents’ reliance on ratings means that unjustified ratings would jeopardize the rater’s reputation. Agent payment for ratings also assures the existence of a private party willing to pay for the ratings, since the rating package provides sales agents with more than a simple summary scale of publicly available rating outcomes.

The question of whether product ratings can alleviate problems of unobservable quality is important for assessing the welfare effects of insurance product from deregulation. One potential barrier to deregulation may be concerns about the expected consequences of greater product variety creating information asymmetries about product quality.

The German case demonstrates that under some market conditions a private market for product ratings may arise in the absence of government product regulations. Our examination suggests that the governance and competition characteristics of this market are favorable for the production of unbiased and informative ratings. Our analysis of ratings of disability insurance products in this market supports this interpretation: we found no evidence of the upward bias in private ratings that is predicted to be a problem in many rating markets, and the ratings of competing raters are differentiated in the ways that theory predicts will occur if competition leads to more informative ratings. These characteristics suggest that the German market for private insurance ratings can provide consumers with useful signals of insurance product quality.

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EU Intermediary Regulation and its Impact on Agent Quality

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Abstract

The EU Directive on Insurance Mediation (2002/92/EG) imposes licensing standards for insurance agents and brokers throughout the European Union. Implementation of this Directive in Germany created the first professional entry requirements for agents and caused many to exit the market. This study uses policy-level data from a German insurer encompassing the years just before and just after the Directive, to provide evidence of the impact of licensing on insurance intermediation quality. We compare the pre-Directive quality of agents who drop out with those who remain, and provide difference-in-differences estimates of the quality effects of the Directive by comparing the agency channel to the direct selling channel which was unaffected by the law. Results suggest that the Directive may have had beneficial effects on agent quality through increases in remaining agents' quality efforts, but exiting agents were not of lower quality than those who remained. The data also suggest that consumer search increased as a result of agent licensing, and that customers of exiting agents were particularly likely to search.

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1. Introduction

Entry restrictions and minimum qualification requirements in professional service occupations have a long history in the market economies of the United States (US) and the European Union (EU), and apply to a wide range of professions from health and financial services, to teaching, real estate, beauty and food services.¹ In public policy debates, occupational licensing is often justified as necessary to improve or maintain high quality of service provision within the licensed profession. The economic frame for this argument relies on information asymmetries that make it difficult for consumers to determine professional service quality.

The prevailing view of professional licensing in the economics literature nonetheless runs counter to these arguments. Most empirical studies conclude that the main beneficiaries of licensing are the regulated professions: licensing raises barriers to entry and as a consequence raises wages and prices. Most studies find little or no positive effects of licensing on quality.² However, the difficulty of measuring quality has been noted as a weakness in the literature (Kleiner 2000); and identification of quality effects has been hampered by data limitations that restrict most studies to cross-sectional comparisons (Svorny 2000; Kleiner 2000). These problems suggest that evidence on the quality effects of licensing is far from definitive.

This study provides stronger evidence on the quality effects of licensing by studying the effects of licensing requirements introduced through exogenously determined legislation. Specifically, the study examines the effects on insurance agent quality in Germany due to changes resulting from the EU Directive on Insurance Mediation (IMD, or Directive). The IMD imposes minimum standards of professionalism and competence for insurance agents and brokers

¹ In the US, Kleiner (2008) reports that over 800 professions require licensing for entry in one or more states, and that licensing requirements have increased rather than decreased over time.

² Comprehensive reviews of the literature are provided in Kleiner (2000), Kleiner (2008) and Forth et al. (2011).

throughout the EU. Before the implementation of the IMD, there had been no legal standards or professional regulation of the practice of insurance agents in Germany. The introduction of agent licensing in Germany thus constitutes a unique quasi-experiment that produced an exogenous increase in formal barriers to entry and higher minimum quality standards for the profession.

The study analyzes a large dataset of insurance agents' portfolios of contracts from a German insurance company. The dataset comprises property-liability insurance policies sold and serviced by agents in the years just prior to and just after implementation of the IMD in Germany. Inferences about the effect of licensing on agent quality are made by comparing quality across different groups of agents both before and after the introduction of licensing. We test for two effects of licensing on agent quality predicted by quality-assurance theories: first, that licensing led to the exit of agents who provided lower service quality than those who remained in the market; second, that quality provision by agents who remained in the market increased after the introduction of licensing.

Our results suggest that the new licensing requirements led less productive agents to exit the market, but there is no evidence that these agents provided lower service quality. Nonetheless, we find some support for the hypothesis that licensing increased service quality among agents who remained in the market, and no evidence of a decrease in service quality. In the short run, an additional impact of licensing was an apparent increase in consumer search behavior due to agent exits: we observe a large and statistically significant increase in the rate of customer-initiated contract cancellations after licensing, and customers whose agent exited the market were especially likely to cancel. Because of the mixed evidence on the quality effects of licensing and because the number of intermediaries was greatly reduced, the gains to consumers from these search activities are unclear.

The paper proceeds as follows. Section 2 provides an overview of the literature on entry restrictions into professional service occupations. Section 3 discusses insurance intermediation in Germany before and after implementation of the IMD. Section 4 describes the data used in the analysis and Section 5 outlines the study's research design. Analysis of whether licensing led lower quality agents to exit the market is reported in section 6, and estimates of the effects of licensing on quality provision by agents who remain in the market are reported in section 7. The final section of the paper concludes and provides an outlook for further research.

2. Licensing and Quality

2.1 Theoretical Perspectives

Professional licensure requires individuals to meet and (in many cases, to maintain) certain standards in order to practice in the specified field. Minimum standards could raise service quality through both sorting effects and incentive effects. The sorting benefits are premised on the adverse selection model of unobservable quality first proposed by Akerlof (1970) and elaborated in the licensing context by Leland (1979). In this context, licensing can be viewed as a screening device which enables consumers to distinguish high-quality from low-quality goods or services. Shapiro (1986) extends this idea using a model where service quality is related to providers' human capital investments. Licensing imposes a minimum human capital investment that raises average quality of service providers.

Shapiro's model also predicts that licensing will raise incentives to provide high service quality. The model recognizes that licensing is usually applied in markets where quality may depend on choices made by a service provider. Consumers cannot observe providers' human capital investments, but can observe service quality after a provider has been in the market for a sufficient time. This creates a reputation penalty for low-quality service, which providers have a

heightened incentive to avoid due to the cost of human capital investments needed for licensing. This reputation effect assures that, having invested to meet the licensing standards, providers have an incentive to provide high quality services (see also Darby and Karni 1973; Klein and Leffler 1981).

Combining these perspectives, professional licensing standards may raise quality through sorting effects by forcing lower-quality providers to exit the market or to make investments to meet the standards; and/or through incentive effects which raise providers incentives for high-quality service provision. These effects may be reinforced in the long-run by the entry-reducing effects of licensing. Reductions in the total number of suppliers and higher average quality will lead to higher wages/prices for the service, thereby increasing practitioners' returns, attracting yet more high-quality entrants and providing incentives for high quality in order to preserve rents (Kleiner 2000; Forth et al. 2011).

Through these mechanisms licensing standards can yield social benefits in the presence of asymmetric information about quality, if all consumers prefer high quality or if standards are set so as to eliminate only quality levels below those demanded by any consumer. On the contrary, if licensing standards reduce consumers' free choice of (known) quality levels, the high-quality equilibrium may not be superior to the unregulated equilibrium. For this reason, critics often argue that certification standards – which permit providers who meet minimum qualifications to be certified as such, but do not force other providers out of the market – are preferred (Leland 1979).³

Critics of licensing also note that entry restrictions may succeed in raising wages and prices but may fail to raise the quality of services provided. Spence (1973) first proposed that

³ In contrast, in Shapiro's (1986) model certification is not always preferred to licensing. It may lead to excessive investments by providers as a form of signaling high quality, as in Spence (1973).

entry requirements may serve to signal that investments have been made, but the investments need not enhance quality. In this case providers' investments to obtain licensing will only dissipate rents associated with the entry barriers that licensing creates. Consistent with this idea, a common criticism of occupational regulations is that licensing standards vary across jurisdictions and are often allowed to become out-of-date, suggesting that quality assurance is not their primary goal (Kleiner and Wheelan 2010).

Relatedly, political economy theories argue that licensing is used by professions only as a means of restricting entry and protecting rents (Stigler 1971). The quality of service provided may not rise, and may even fall, if restricted entry reduces pressure for practitioners to compete over service quality (Carroll and Gaston 1981; Harrington and Krynski 2002). Finally, irrespective of the quality of service provided by licensed professionals, critics note that average service quality *received* by consumers may fall if higher prices lead consumers to turn to alternatives not supported by licensing (Rottenberg 1962).

2.2 Empirical Studies

There are relatively few empirical studies of the effects of licensing on quality of professional services, and as noted above one of the key difficulties in such studies is identifying a robust measure of quality. As a result, studies differ greatly in their approaches to quality measurement. Some studies use general measures of *input* quality such as education (Angrist and Guryan 2008), training (Klee 2010; Forth et al. 2011), or outside wage opportunities (Kugler and Sauer 2005). Industry-specific input quality measures such as length of time spent with (optometry) patients (Feldman and Begun 1985), thoroughness of (optometry) examinations (Haas-Wilson 1986), and daycare quality scales (Rigby et al. 2007) have also been used. Other studies employ an ingenious variety of *output* quality measures including mortality rates (Gaston and Carroll 1981; Law and Kim 2005), malpractice premiums or malpractice suits (Kleiner and

Kudrle 2000; Law and Kim 2005), or consumer complaints to regulators (Kleiner and Kudrle 2000; Shilling and Sirmans 1988). Still others use quality measures based on *external evaluations* of quality: expert evaluation of floral arrangements for florists (Carpenter and Dick 2012) and prescription accuracy for optometrists (Haas-Wilson 1986), dental health of young adults in the case of dentists (Carroll and Gaston 1981; Kleiner and Kudrle 2000), and student achievement in the case of teachers (Goldhaber 2007).

Many of these measures have obvious shortcomings. Skill investments may not translate into higher quality service provision (Spence 1973), and consumer complaints depend on consumers' propensity to complain and the barriers to complaining, as well as on service quality (Kolodinsky 1995; Venezian 2002). Liability insurance premiums and indisputably bad outcomes such as excess mortality are probably not very sensitive measures of quality. Additionally, these outcomes and others such as health or achievement may be influenced by unobservable factors other than service quality.

Perhaps as a result, findings on the relationship between occupational regulations and service quality have been mixed. Studies using measures of input quality generally find no relationship between regulation and quality (Angrist and Guryan 2008; Klee 2010; Forth et al. 2011), and some find even negative effects due to selection into the profession (Kugler and Sauer 2005). Some studies using output quality measures also find that regulations do not increase quality (Haas-Wilson 1986; Kleiner and Kudrle 2000). Others show that received quality (after accounting for lower rates of professional use due to restricted supply) may be lower (Carroll and Gaston 1981), or that licensing standards may not correctly target low-quality practitioners for exclusion (Goldhaber 2007). However, some studies find a positive association between licensing standards and output quality. For example, Law and Kim (2005) show that more stringent medical licensing standards are associated with lower mortality rates from preventable causes;

Rigby et al. (2007) find that more stringent training requirements for childcare teachers lead to higher quality daycare receipt among disadvantaged children; and Shilling and Sirmans (1988) find that higher licensing standards for realtors lead to lower consumer complaint rates.

In addition to differences in quality measures, Kleiner and Kudrle (2000) argue that empirical results may be inconclusive because the true effects of licensing differ across professions. Supply and demand conditions differ across markets and industries, and institutional features of licensing regulations vary greatly as well. In this paper we argue that an additional limitation of existing studies is reliance on differences in licensing stringency across jurisdictions in which some level of professional licensing is required. Such studies can measure only the quality effects of greater licensing stringency, rather than the effects of licensing compared with no licensing. There may be distinct differences in the effects of moving from a regime without any licensing standards to one that imposes standards.

Despite the existence of licensing requirements for insurance agents in many countries, to our knowledge this is the first empirical study of the effects of licensing on the quality of insurance intermediation.⁴ The study makes use of data on a large sample of insurance contracts from the pre- and post-licensing regime in Germany. As noted previously, the introduction of licensing and the general licensing requirements in Germany were exogenously determined by an EU-wide Directive on insurance intermediaries. These characteristics create an ideal environment in which to examine the quality implications of professional licensing standards.

⁴ Reviews of the literature on insurance intermediation (see for example Regan and Tennyson 2000; Hilliard, Regan and Tennyson 2014) note the lack of analysis of this issue to be an important gap in the literature.

3. Implementation of Agent Licensing in Germany

Prior to EU unification, in most European countries professional regulation was undertaken through industry self-regulatory bodies. Development of the single European market created the need for mutually recognized standards of professional quality, and has led to an increase in direct government regulation of the professions.⁵ By imposing uniform licensing requirements, the IMD aimed to make the European insurance market more homogeneous by allowing intermediaries to do business in other EU countries, and to protect consumers' interests by ensuring a high level of professionalism and competence among those intermediaries.⁶

The Directive created the first licensing requirements for insurance agents in Germany. The potential for licensing to increase transparency and quality in the German agent market certainly exists, since in the pre-licensing regime serious deficiencies in intermediation practices were present. For example, it was not difficult for agents who sold policies of only one insurer to pretend to provide independent advice about the choice of an insurer, and this behavior – known as pseudo-broker-nuisance – was common.⁷ With the incorporation of the IMD into German Law in May 2007 the environment for insurance intermediation changed drastically. The law regulates both agent entry into the market and the conduct of intermediation, through minimum entry standards and ongoing behavioral standards.

Behavioral standards include requirements to provide information, notification, advice and documentation. According to the law all insurance agents must provide information about their license, their relationships with insurance companies, and consumers' rights under insurance

⁵ Despite having the practical effect of increasing government regulation, EU standardization was implemented largely with the aim of opening markets by reducing anti-competitive restrictions (Terry 2009).

⁶ http://ec.europa.eu/internal_market/insurance/mediation_en.htm

⁷ See Reiff (2007) p. 1 and Reiff (2003) p. 693-696.

contracts.⁸ The customer's desires and needs must be taken into consideration when providing advice; and information must be given concerning the specifics of individual products. Recommendations must be based on a sufficient number of insurance products, with independent agents required to provide a broader choice set than exclusive agents who only work for one company. Additionally, the entire process must be documented.

Two recent articles have analyzed the implications of these behavioral requirements for insurance agents in Germany. Heinrich, Kaiser and Klier (2008) focus on the increased documentation required in the insurance application process, which has been purported to increase agent costs and to provide no added benefits. The authors conclude that agents' costs are not dramatically higher and that the documentation provides insurers with higher quality data about customers. Schwarzbach, et al. (2011) use data from surveys of German agents before and after the IMD was implemented and find no significant effects on the costs of intermediation, as measured by the agent's time invested in the policy application process.

Entry standards of the IMD include mandatory registration in the professional trade Register⁹ and the meeting of four qualification requirements. In order to be registered as an insurance agent, an individual must (1) prove insurance expertise by passing a test organized by the German chamber of industry and commerce ("Industrie- und Handelskammer", IHK); (2) hold professional liability insurance; (3) have a good repute (no criminal convictions in the last five years); and (4) demonstrate a solid financial condition (no ongoing insolvency proceedings).

⁸ Name and company, business address, registration number and contact details of the German chamber of industry and commerce (DIHK), investments of more than 10% in an insurance company, investments of more than 10% of an insurance company in the intermediary's business and contact details of the responsible ombudsman must be provided to each customer.

⁹ This may have tax implications for agents since hiding intermediation income is made more difficult.

Only intermediaries meeting all four of these requirements may be signed into the professional trade register.

Although the entry requirements may seem stringent at first glance, the licensing test is not demanding and may be taken repeatedly until a passing score is achieved, subject only to a testing fee (320€). Licensing requirements are also alleviated by a number of exemptions. Agents who are direct employees of an insurance company are exempted from requirements (1) and (2), at least formally. In this case the insurance company assumes responsibility for assuring an adequate level of knowledge of its employees and is liable for their mistakes.¹⁰

Due to the large number of agents for whom exemptions may apply, the actual relevance of the Directive has been debated.¹¹ However, declines in intermediary employment figures in the post-IMD-implementation period speak clearly to the impact of the law on the agency market. In 2007 there were more than 400,000 independent and exclusive agents in Germany, but this figure fell nearly 39 percent (to 244,000) by 2009.¹² Although it seems apparent that the shrinking of the intermediary market came about due to the new licensing requirements, the empirical analysis in this paper sheds light on whether licensing resulted in *lower quality* agents exiting, as predicted by quality-assurance theories of licensing.

¹⁰ Certain agents who sell only a very few insurance policies are also exempted from the requirements. In order to fall into this category an agent must operate part-time, sell only one kind of product which may not be life or liability insurance, and must engage in insurance sales as a sideline to another sales or service profession. The yearly premium of each policy must be less than €500 and the contract period for each policy must be less than 5 years.

¹¹ Doubts were articulated in practitioner journals, see for example Erlenbach (2007) p. 204 or Beenken (2007) p. 287. Schwarzbach et al. (2011) also question whether the goal of higher intermediary quality was reached. Because their data only allow for a rough approximation of the construct of quality, they encourage further research in this direction.

¹² Based on a comparison of GDV Annual reports in 2009 and 2010 and Schwarzbach et al. (2011).

4. Data and Sample

Our unique dataset comes from an insurance company located in the southwest of Germany. We observe all insurance policies (contracts) in force during the period from January 2004 through December 2010, for selected lines of property and liability insurance. The data are provided at the policy level, and we have identifiers for both the customer who purchased the policy and the agent who sold and services the policy. Table 1 displays the number of insurance contracts, customers, and agents by year of our sample period.

The raw dataset contains an average of 348,000 insurance contracts each year for any of four different types of property-liability insurance for which we have data.¹³ The contracts represent purchases made by around 180,000 individuals each year. The insurer contracts with an average of about 2,000 insurance agents per year when considering the entire sample period, but the number declines by almost one-half after licensing requirements began to be enforced in 2008.

[Insert Table 1 here]

4.1 Sample for Analysis

The insurer providing the data sells policies via three different distribution channels: exclusive agents, independent agents, and a direct-selling channel. Exclusive agents are non-employee sales agents who sell only the policies of this company, whereas independent agents are non-employee agents who sell the policies of more than one company. The direct-selling

¹³ The dataset comprises contracts for liability insurance (45.8%), home insurance (15.3%), home contents insurance (26.2%), and accident insurance (12.7%). Liability insurance covers bodily injury or property losses that the covered individual causes for other individuals. Home insurance covers losses of the house, whereas home contents insurance covers the inventory in the house. Accident insurance pays a rent if the insured person is no longer able to work due to an accident or a covered disease.

channel solicits customer inquiries through advertisements, and sales are completed by employees in a call center.

For each policy in the dataset, we observe an agent identification number if it was sold by an agent; policies without agent identifiers were sold through the direct selling channel. An agent will appear in the data in a given year only if listed as the agent representing an active insurance contract with this company. This means that for independent agents, we observe in our data only those policies placed with this insurer. Because of this, the treatment group we use for the study is the set of exclusive agents and the portfolios of contracts sold by these agents. Exclusive agents are subject to the requirements of the IMD, and the portfolio of insurance contracts in our dataset represents their entire portfolio of contracts in the studied lines of insurance. Observations on exclusive agents in each year of the data are displayed in table 1 along with those for the complete set of agents.

Table 2 displays summary statistics for the insurance customers of exclusive agents. The first column in the table reports statistics for the full set of exclusive agents, and are averaged over the entire sample period. The customers are exclusively private individuals, not businesses. The average customer's age is about 52 years and 43 percent of customers are women. Over 90 percent of customers live in the region of Germany where the insurance company is headquartered. On average, a customer holds just over two contracts out of the four for which we have data and nearly three-fourths of customers receive a public employee discount on their insurance premium.¹⁴

[Insert Table 2 here]

¹⁴ This is a discount classification generally offered to office workers and does not mean that the customer is a government employee.

4.2 Licensing Impact on Exclusive Agency Workforce

Table 1 reveals that the number of exclusive agents working for the company is relatively stable from 2004 through 2007 but drops sharply in 2008. The number of exclusive agents under contract with the company falls from 2,388 in 2007 to 994 in 2008, and to 742 by 2010. This represents a 69 percent decrease in the exclusive agency workforce after licensing was required. According to the company, this decline in the number of exclusive agents is a direct consequence of the IMD, which was enforced beginning January 1, 2008. With the advent of licensing, all agents faced the choice of exiting the market or investing to meet the licensing requirements.

The dramatic effect of licensing requirements on the exclusive agency workforce provides an important source of variation for our analysis. A complicating factor, however, is that a variety of selling models were observed among exclusive agents in the pre-licensing regime. As seen in table 1, exclusive agents were categorized by the company into two main groups: professional agents and office-workers. Office-workers are individuals who work for the company in a non-agent capacity but who nevertheless sell some insurance policies.¹⁵ In addition, the company informed us that many exclusive agents in the professional category worked only part-time.

These differences are important because a major hurdle to remaining in the market is the requirement of professional liability insurance. To reduce agents' licensing costs the company offered to pay for the liability insurance of its exclusive agents – but only for full-time agents.¹⁶ Thus, the effective choices facing office-worker agents were to convert to full-time professional selling, to forgo selling activities and remain with the company in a non-agent capacity, or to exit

¹⁵ The second column of table 2 reports average customer characteristics separately for the professional exclusive agents. Customer characteristics do not vary much across professional and office-worker agents.

¹⁶ The company offered the opportunity to become a full-time agent only to those part-time and non-professional agents who produced a sufficient amount of business. Thus, some agents may have exited the market involuntarily.

the company.¹⁷ Professional part-time agents faced the choice of converting to full-time professional selling or terminating their agency contract with the company. As a result, many of the exclusive agents who exited as a result of the IMD were part-time agents, and a higher fraction of part-time agents than full-time agents exited. This pattern of exits is also observed in the German agent market as a whole, as reported by Schwarzbach, et al. (2011).

Figure 1 demonstrates, however, that not all of the exclusive agents from this company who exited the market were small producers. The figure plots the distributions of the total number of insurance contracts in the 2007 portfolios of exclusive agents, plotting separately the distributions for agents who exit after the IMD and agents who remain in the market. The distribution for exiting agents is more heavily weighted toward smaller portfolios: the median exiting agent services 10 contracts and the median agent who does not exit services 110 contracts. Nonetheless, some exiting agents service more than 1,000 contracts and nearly 10 percent of exiting agents service at least 100 contracts.

[Insert Figure 1 here]

Table 3 compares the demographic and contract portfolio characteristics of the exclusive agents who exited and those who remained in the market, using data aggregated to the agent level in the pre-IMD time period. The table provides comparisons of exiting and remaining agents for the full set of exclusive agents and separately for the set of professional agents. In the full sample, agents who exit are nearly 5 years older on average than those who remain in the market, and this difference is statistically significant. Among professional agents, however, exiting agents are slightly younger than those who remain and the difference is statistically significant at the 10 percent confidence level. Across both sets of agents, those who exit the market sell substantially

¹⁷ The office-worker agents shown in the table in years 2008-2010 are those who converted to professional agent status.

fewer new contracts in the three years before licensing and this difference is statistically significant. There are also some statistically significant differences in product mix for exiting and remaining agents.

[Insert Table 3 here]

5. Research design

5.1 Measuring Intermediary Quality

While there have been no studies of insurance agent licensing standards, many studies have attempted to assess the quality of services provided by insurance agents.¹⁸ Observing and testing insurance intermediary quality presents the measurement difficulties experienced in other studies of professional licensing. Some studies make use of *output* measures of agent quality by comparing the rate of consumer complaints to regulators for insurers using different types of agency sales forces (Doerpinglehaus 1991; Barrese, Doerpinglehaus and Nelson 1995). A few studies have attempted to directly measure agent quality using *input* measures of quality (for example time spent with client, coverage reviews) obtained from surveys of insurance agencies (Etgar 1976; Cummins and Weisbart 1977). Our study uses both an input measure and an output measure of agents' intermediation service quality.

Our input measure of quality uses information on the insurance coverage in the policy sold by an agent. The theoretical intermediation literature often models the role of an insurance agent as the matching of a customer's needs to an insurance product.¹⁹ Empirical assessments of

¹⁸ See, for example, Etgar (1976), Cummins and Weisbart (1977), Barrese and Nelson (1992), Barrese, Doerpinglehaus and Nelson (1995) in the U.S. context. Eckardt (2007), Trigo-Gamarra (2008), Eckardt and Räthke-Döppner (2010) examine this question using data from Germany.

¹⁹ See, for example, Cummins and Doherty (2006), Eckardt (2007), Focht, Richter and Schiller (2013).

the quality of agent matching services are nonetheless difficult because it is not *per se* clear what insurance product would best fit a person with given characteristics. However, another strand of the intermediation literature focuses on the incentives for *over-selling* or demand inducement. Intermediaries who are compensated via percentage-commissions have a financial incentive to sell policies with higher premiums – i.e., policies with higher amounts of insurance coverage. In the theoretical literature, over-selling has been noted as a problem in intermediated markets generally (Darby and Karni 1973; Dulleck and Kerschbamer 2006; Inderst and Ottaviani 2009) and in insurance markets specifically (Gravelle 1993; Focht, Richter and Schiller 2013; Schwarcz and Siegelman 2014). We are not aware of empirical studies that confirm over-selling in insurance markets, and some studies suggest that compensation does not affect agents' recommendations (Kurland 1995; Cupach and Carson 2002). However, prominent insurance mis-selling scandals in the U.S., U.K. and other countries suggest that compensation affects agents' recommendations in at least some circumstances.²⁰

Although we do not observe in our data the specific amount of policy coverage, some policies are classified as “high-coverage” or “luxury” policies; we therefore use the sale of a luxury policy as a measure of potential over-selling by an agent. Table 4 displays the percentage of luxury policies sold in each line and year of our sample period. Some policies do not have a luxury version, and so the base number for the percentages is the number of categorized policies sold. Luxury policy sales vary by line of insurance and year, with the highest rates observed in

²⁰ These include mis-selling of U.K. pensions in the 1990s; mis-selling of commercial insurance in the U.S. in 2004; and recent mis-selling of life insurance products in India (see for example Anagol, Cole and Sarkar 2012) and the Netherlands.

home contents insurance (39.1% in 2010) and accident insurance (25% in 2010). In general, the share of luxury policies increases over time.²¹

[Insert Table 4 here]

Our output measure of agent service quality uses information on customer-initiated policy cancellations. The maintained hypothesis is that a customer who receives poor service from an agent will be more likely to cancel his or her insurance policy at the end of the policy term. Institutional features of the German insurance market provide justification for the idea that end-of-term customer cancellations are related to agent quality. In Germany as in some other European countries, insurance policies automatically renew at the end of the policy term unless actively cancelled – with notice – by the customer.²² In some limited circumstances a customer may cancel the insurance contract before the end of the policy term. These circumstances include no longer facing the risk, experiencing a loss, a change in policy terms, and a change in the policy premium. However, agents in Germany provide predominantly brokerage (sales and advice) services and are not responsible for claims handling. If a customer experiences a loss, he or she deals with the insurance company directly. These contract features mean that end-of-term policy cancellations by the customer should not reflect cancellations for reasons such as no longer

²¹ Product differentiation varies between products and over the years. A two product choice (base and comfort) was replaced for some of the products with a three versions choice (basic, classic and exclusive). We categorize policies in the highest category as “luxury”.

²² In order to cancel a contract, the customer must notify the insurer within a certain time period (one or three months) before the renewal date. If the customer does not take any action, the policy automatically renews for another term. In general, non-life insurance policies are one year contracts and all policies in our dataset have one year terms.

facing the risk, experiencing a loss, or a change in the policy terms.²³ As a result, customer-initiated cancellations that occur at the end of a policy term appear likely to indicate dissatisfaction with the agent's services or recommendations.

The insurance contract dataset reports policy cancellations and the reasons for cancellations in each year. Table 5 displays cancellation rates (number of cancellations/number of active policies) by year and by reason for cancellation. Total cancellation rates in each year average around 3 percent when aggregated across all reasons for cancellation. The majority of cancellations are initiated by the customer, and the most common cancellations are at the end-of-term (switching insurers) or due to no longer facing the risk (dropping coverage). Customer-initiated end-of-term cancellations range from 1.3 percent to 2.2 percent of contracts per year during our sample period.

[Insert Table 5 here]

5.2 Identification Strategy

Our estimates identify the effects of licensing requirements by comparing quality measures for different agent groups, before and after the IMD was enforced. As noted previously, exclusive agents are the treatment group since they are subject to the licensing requirements and our data contain their entire portfolio of insurance contracts. Because the fixed costs of entry imposed by the IMD (liability insurance requirements and testing fees) imply that part-time agents have incentives to exit for reasons unrelated to low quality, we are careful to report estimates for both the full sample of agents and for subsets that exclude part-time and non-professional agents.

²³ Although price changes may take effect at the end of the policy term, and premium increases may lead to customer cancellations, all agents will experience this equally.

Our first analysis tests the hypothesis that agents who choose to exit the market as a result of licensing requirements offered lower service quality than agents who remain in the market. The hypothesis is tested by comparing the pre-IMD quality of agents who later exit to those agents who later choose to remain in the market. If licensing caused the lowest quality exclusive agents to exit the market, we expect to observe a higher rate of over-selling among the exiting agents, and/or a higher rate of customer cancellations among these agents. We test for these relationships using two different approaches. First, using data aggregated to the agent-portfolio level for years 2004-2006, we estimate probit models of the likelihood an agent exits the market after licensing is imposed, as a function of the agent quality measures, agent characteristics and characteristics of the agent's portfolio of contracts. These models test the hypothesis that lower agent quality raises the likelihood (at the margin) that the agent later exits the market. Second, using data on individual insurance contracts we estimate probit models that use a quality measure as the dependent variable, estimating quality as a function of both the agent's (later) exit decision and customer characteristics. These models test the hypothesis that after controlling for differences in customer characteristics, contracts sold by an agent who exits due to licensing are of lower quality.

Our second analysis tests the hypothesis that service quality provision by the exclusive agent sales force increases after the imposition of licensing requirements.²⁴ Pre- and post-IMD quality measures are first compared by estimating contract-level probit models of the quality measures using data from all years of the sample, for only the sample of agents who remain in the market after licensing. By inclusion of a post-licensing indicator, we test whether the licensing requirements lead to an increase in quality provision by these agents.

²⁴ Any contracts of exiting agents that appear in the post-IMD years of data (having been reassigned to a remaining agent or to the direct channel) are removed for these pre- versus post- analyses.

We also construct difference-in-differences (DD) estimates of relative pre- and post-licensing quality provision by the exclusive agency channel. The direct selling channel is the control group in this analysis, since the channel was not affected by the licensing law. The analysis uses the full set of sample years 2004-2010, and data for each year includes only those exclusive agents who remain in the market in the post-licensing period. The estimates compare the annual aggregate quality measures of policies sold by exclusive agents and those sold through the direct sales channel, before and after the licensing law. Positive quality effects of licensing will be indicated by a statistically significant increase in relative quality of the exclusive agency channel after the implementation of the IMD.

6. Results: Did Lower-Quality Agents Exit due to Licensing?

6.1 Determinants of Agent Exits

We investigate the characteristics of agents who drop out of the market after the introduction of licensing by using a multivariate probit regression framework on data aggregated to the agent level. An indicator variable set equal to one if the agent exits the market after licensing is regressed on the agent's characteristics in 2006 and measures of the agent's portfolio of contracts averaged over years 2004 through 2006. Lagged values are used because of concerns that agents' anticipating dropping out of the market may have made behavioral or portfolio adjustments in anticipation of that fact. The impact of agent quality on the likelihood of dropping out is measured by the average end-of-term customer-initiated cancellation rate and the percent of luxury policies sold by the agent.

The age of the agent in 2006, and an indicator variable set equal to one if the agent was over age 60 in 2006 are included as controls in the model, since older agents should be more likely to exit the market when new requirements are imposed. Agent gender is also included as a

control, although we have no specific hypotheses regarding the effects of gender. Other control variables in the estimated model are the number of contracts in the agent's portfolio, the average number of contracts per customer and the change in number of contracts between 2004 and 2006. These variables are expected to be negatively related to agent exit since they are associated with higher expected returns from remaining in the market.

The model is first estimated using data on all exclusive agents; this specification includes an indicator for professional agents because professional and office-worker agents may have differing rationales for dropping out of the market. The model is estimated a second time using data for only professional exclusive agents, and then a third time using data only for full-time professional exclusive agents. We estimate the models separately for the full-time professional agents because of the concern noted previously that part-time agents may exit the market as a result of fixed costs of IMD requirements. We consider full-time agents to be those agents with at least 15 active contracts, because we do not directly observe in the data whether an agent works full-time or part-time. The threshold of 15 contracts is based on inspection of the distribution of agent portfolio sizes. In years 2004-2006, 15 contracts is the median number of contracts for an agent. In 2010 (when part-time agents have exited or convert to full-time) 90 percent of agents have at least 15 contracts in their portfolio.²⁵

Table 6 presents the results of estimating the models. The first model specification includes only the agent's personal characteristics and the cancellation rate; the second includes only the personal characteristics and the luxury sales rate. The two subsequent specifications add contract portfolio characteristics to models that include either the cancellation rate or the luxury sales rate, and the final specification includes all controls and both quality measures.

²⁵ Robustness checks confirm that local changes in the cut-off number used to categorize part-time agents do not affect results.

For the full sample of agents and the sample of all professional agents the coefficient estimates on the agent cancellation rate are nearly zero and are not statistically significant in any model specification. There is a larger positive relationship between an agent's cancellation rate and the likelihood of exit for the sample of full-time professional agents, but the estimated coefficient approaches statistical significance (10 percent confidence level) in only the baseline specification. In contrast, the rate of luxury policy sales is statistically significant in many of the model specifications, but in contrast to the quality hypothesis it tends to be negatively related to agent exit. All statistically significant estimates indicate a negative relationship, opposite to the expected sign if agents who engage in over-selling are more likely to exit. In short, these estimates fail to support the hypothesis that agents who provide lower quality were more likely to exit the market as a result of licensing requirements.

A number of other variables are significantly related to agents' likelihood of exit. These include the size of the agent's portfolio of contracts, and the average number of contracts per customer, which are negative and statistically significant. This suggests that agent productivity is a strong predictor of an agent's decision to exit.²⁶ Female agents are significantly more likely to exit than males, and this relationship is statistically significant in all samples and specifications. Agent age is also an important predictor of dropping out, with older agents – and especially agents over the age of 60 – significantly more likely to exit after licensing is imposed. Interestingly, estimates using the full sample of agents indicate that professional agents are significantly more likely to exit as a result of licensing than office-worker agents, after controlling for other factors.

²⁶ In the full sample, this may be partly mechanically determined since the company did not offer full-time status to part-time and non-professional agents with small contract portfolios. The fact that these results hold for the full-time professional agents is nevertheless noteworthy.

[Insert Table 6 here]

6.2 Exiting Agents' Quality

Although it appears that lower agent quality is not significantly related to an agent's decision to exit the market, this does not mean that exiting agents provided the same or higher average quality than those who remained. We provide evidence on this question by testing for significant differences in pre-IMD quality measures for exiting and remaining agents. To account directly for potential differences associated with lines of insurance and customer characteristics, these estimates use panel data for 2004-2006 on the individual contracts sold and serviced by exclusive agents.

We estimate probit models of the contract-level quality indicators as a function of the agent-exit indicator, year indicators, and control variables for customer and contract characteristics. The key explanatory variable of interest in the model is the agent who sold the contract – specifically, whether that agent dropped out of the market after licensing was required – captured by an indicator variable set equal to 1 if the agent exited in 2008 or later.²⁷ Control variables for customer characteristics are the customer's age and the age difference between agent and customer, the duration of years the contract has been in force, an indicator set equal to 1 if the customer receives a public employee premium discount, an indicator of premium payments made via direct debit or bank transfer, an indicator of the customer's location (equal to 1 if the customer lives in the same region as the insurance company's location), and the distance between the customer's residence and the agent's office.

²⁷ For policies sold prior to 2004, we do not observe the selling agent. We assign these policies to the agent who administers the policy in 2004. This agent may be the selling agent, or may be a servicing agent assigned to the policy if the selling agent exited or retired prior to 2004.

We construct the dependent variable measuring customer cancellations as a dummy variable for each policy set equal to 1 in a year that the customer cancelled at the end of the policy term (set equal to 0 otherwise). Policies appear in the dataset in each year that they remain active; if a policy is cancelled in a year it does not appear in the dataset in the following years. Because all policies in the dataset have a term of one year, each policy is at risk of a customer-initiated end-of-term cancellation in each year. The estimation sample that uses an indicator of luxury coverage as the dependent variable differs, because this characteristic is determined only in the year of sale. These estimates therefore make use of data on each policy only in the year of its sale, via an indicator set equal to 1 if the policy is categorized as providing high-value (luxury) coverage.²⁸ If exiting agents are of lower quality their contracts are expected to be more likely to offer luxury coverage and to exhibit a higher likelihood of customer-initiated end-of-term cancellation, after controlling for customer characteristics and type of insurance.

The estimated probit models are reported in table 7. Results are reported as marginal effects, and standard errors of the estimates are clustered at the agent level. As for the previous estimates, the estimates are undertaken using the full sample of exclusive agents, the sample of professional exclusive agents, and the sample of full-time professional exclusive agents.

[Insert Table 7 here]

The models using either of the quality measures suggest that exclusive agents who exited the market as a result of licensing requirements provided similar service quality to those agents who remain in the market. The customer cancellation models show that the likelihood of policy cancellation in the pre-licensing period is higher for agents who later exit the market, but the estimated coefficients are not statistically significant. This result holds for all three samples of

²⁸ In addition, liability insurance contracts are excluded from these estimates since there were no high-coverage (luxury) policies sold in the sample years 2004-2006.

agents, including only the professional agents and the full-time professional agents. Thus, the lack of differences in cancellation rates for agents who later exit should not be attributed to the potentially closer relationship between office-worker agents and their customers. Indeed, in the estimates using the full sample of agents, we observe that on average the professional agents have lower cancellation rates than office-worker agents, and that this effect is statistically significant. This suggests that professional agents provide higher service quality.

The models of luxury policy sales also reveal no statistically significant differences between exiting and non-exiting agents, and as in previous models the sign of the estimated coefficients suggests exiting agents had a lower propensity to oversell. Furthermore, estimates using the full sample of agents indicate that professional agents are more likely than office-worker agents to sell high-coverage policies. This is consistent with the idea that financial incentives may be more important determinants of policy recommendations from these agents.

7. Results: Did Licensing Raise Intermediation Quality?

7.1 Post-licensing quality differences

We test for changes in exclusive agent quality provision after licensing by estimating the models of agent quality using data from both the pre- and post-licensing period for the sample of agents who remain in the market after licensing is required. These estimates use the panel data on individual insurance contracts and the same control variables as in the versions of the models estimated for the pre-IMD time period. All contracts of exclusive agents who exited the market due to licensing are removed from the sample.²⁹

The hypothesis test rests on differences in pre- and post-IMD indicators. A statistically significant value on the post-IMD dummy variable will indicate a change in quality provision by

²⁹ The contracts of exiting agents were reassigned to either another exclusive agent or to the direct selling channel.

agents who served the market in both periods. The results of estimation are reported in table 8. The left panel of the table shows the marginal effects probit estimates of the models of contract cancellations, and the right panel shows the corresponding estimates for the models of luxury policy sales. As noted above, the samples contain only the exclusive agents who are in the market both before and after the IMD.

The estimates show plausible relationships between customer characteristics and the likelihood of contract cancellation. Contracts with a longer duration, and contracts of customers with a greater age difference with the agent or at a greater distance from the agent, are more likely to be cancelled. Customers who receive a public employee discount are also more likely to cancel, perhaps indicating greater price sensitivity among this customer segment. Older customers, customers in the same region as the insurer, and with payments made by direct debit are less likely to cancel. Interestingly, there are few significant differences in customer characteristics associated with luxury policy purchase, with the only statistically significant effects being that contracts paid for via direct debit and those sold to customers in the same region as the insurer are more likely to offer luxury coverage.

Regarding agent quality efforts, for both dependent variables and all model specifications the post-IMD indicator is positive and strongly statistically significant. Thus, the estimates suggest large changes in quality after licensing – but in the opposite direction predicted by the quality-improvement hypothesis. Customer-initiated cancellations and the rate of luxury policy sales both show a large, statistically significantly increase after licensing was required. We are cautious in interpreting these results, however, since they may reflect other changes that occurred in the market as a result of licensing. For example, licensing may have induced an increase in consumer search (thus, more contract cancellations) and greater revenue-generating efforts among agents (thus, more luxury policy sales). We address this issue in subsequent estimates by

comparing the post-IMD changes for this sample of agents to those for other sellers in our database.

[Insert Table 8 here]

To provide a first check, table 9 reports an additional set of estimates of the determinants of policy cancellations. The samples for these estimated models include contracts sold by all exclusive agents – those who exited the market after licensing and those who remained.³⁰ The estimates are reported on a year-by-year basis for each year 2004 through 2010, to permit direct cross-year comparisons and to avoid the difficulties of interpreting interacted variables in probit estimates. The variable of interest in each year is the indicator of whether the agent who sold the policy exited the market as a result of licensing.

As in all previous estimates results are reported separately for the full sample of exclusive agents, professional exclusive agents, and full-time professional exclusive agents. To conserve space, for each model only the coefficient estimate for the agent-exit variable is reported for each year. The estimates confirm our earlier finding that there is no statistically significant pre-IMD difference in the likelihood of policy cancellation between agents who later exit and those who remain in the market. However, results show that a policy sold by an agent who exits as a result of licensing is significantly more likely to be cancelled in post-IMD years. This result holds for the full sample and for the samples restricted to professional and full-time professional agents. While only suggestive, these findings are consistent with a general increase in contract cancellations post-IMD due to increased consumer search. That is, if service-quality decreases are the cause of contract cancellations there is little reason to expect a higher rate of cancellations among displaced customers than others, given that rates were similar in the pre-IMD period.

[Insert Table 9 here]

³⁰ The contracts of exclusive agents who exit the market remain in the insurer's contract portfolio.

Figures 2a and 2b provide additional evidence by comparing annual average measures of quality for the sample of remaining exclusive agents and the direct selling channel, along with the annual difference of the two (DC-EA).³¹ Figure 2a plots the average annual end-of-term cancellation rates. The data show that annual average cancellation rates are higher for the direct channel than for the exclusive agency channel, consistent with the idea that agents provide better service quality than the direct selling channel.³² After the IMD, cancellation rates trend up for both the DC channel and the EA channel, and increases are much smaller for the EA channel. This pattern is consistent with the increased-search hypothesis, and the greater increase for the DC channel suggests that licensing may have increased consumer confidence in exclusive agents.

Figure 2b compares rates of luxury policy sales for the two selling channels. The data show relatively equal rates across channels pre-IMD, with rates in the DC channel slightly higher; this suggests that overselling is not prevalent in the EA channel. Beginning in 2007 the rate of luxury sales increases sharply for both channels, consistent with a change in the nature of product competition across insurers due to (anticipation of implementing) the IMD. Luxury sales increase more in the EA channel, such that rates of luxury sales are slightly higher post-IMD.

[Insert Figure 2a and 2b here]

7.2 Post-licensing quality difference-in-differences

We provide formal estimates of changes in exclusive agent service provision in response to licensing by benchmarking exclusive agency quality measures to quality in the direct selling channel. To do so, simple DD estimates of annual aggregate quality measures for the exclusive

³¹ As noted previously, all contracts of exclusive agents who exited the market due to licensing, whether reassigned to other agents or to the direct selling channel, are removed from the sample for this comparison.

³² An alternative interpretation is that customers who have a higher propensity to switch insurers self-select into the direct channel (Eckardt 2007).

agents versus the direct selling channel are constructed. The analysis uses data from both the pre- and post-licensing time period for only those exclusive agents who remain in the market post-IMD. Estimates use the two-step approach suggested in Donald and Lang (2007), in which differences in means across the treatment and control group are calculated for each year and then those mean differences are regressed on the post-IMD indicator variable. Donald and Lang note that in this approach any common year-specific shocks to both groups are accounted for, and regression standard errors will be correct as a result.

Annual differences in channel quality measures are constructed as the average rate for direct channel policies minus the average rate for exclusive agency policies (DC-EA) as plotted in Figures 2a and 2b. Because the direct channel is not affected by the IMD, statistically significant post-IMD changes in the difference between direct and exclusive agency quality measures will provide evidence of the causal impact of licensing on changes in quality provided by exclusive agents.

The formal DD estimation results are reported in table 10. The table displays the estimated coefficient and standard error for a post-IMD indicator variable and for a post-IMD linear trend variable, for each of the quality measures. For customer cancellations the estimated coefficients are negative, although very close to zero in magnitude and not statistically significant. These results do not support an increase in exclusive agent service quality efforts as a result of licensing, since they suggest no decrease in end-of-term cancellation rates for the EA channel relative to the DC channel after licensing. Similarly, results using luxury policy sales show no increase in this aspect of agent service quality under licensing. All coefficient estimates on the post-IMD dummies and trend variables are negative and larger in magnitude than those for cancellations; this suggests an increase (rather than a decrease) in luxury policy sales for the EA channel relative to the DC channel after licensing. Only one of the estimated post-IMD

coefficients is statistically significant, however, which is that for the full sample of agents. This result suggests that office-worker agents who converted to full-time agent status may have increased their rate of luxury sales, becoming more similar to other full-time agents.

[Insert Table 10 here]

As a check on the robustness of results, we estimate difference-in-differences using several variants of customer-initiated cancellations as measures of agent quality. These include a combined cancellation rate that includes all customer-initiated cancellations except those due to changes in risk ownership, and cancellations limited to those in which a customer cancels *all* of their policies with the company/agent. Because cancellations that occur within only a few years of policy purchase seem especially likely to reflect dissatisfaction with the agent, we also report estimates based on customer-initiated cancellations that occur within one or two years of the contract initiation. Figure 3a shows the annual differences in cancellation rates across channels (DC-EA) for these cancellation rates. Differences patterns generally mirror those for end-of-term cancellations: DC cancellation rates are generally higher than EA rates (except for cancellation of all products in the year 2008 and 2009). Differences appear to increase after the IMD, especially from 2009 to 2010, suggesting an increase in EA intermediation quality as a result of licensing.

Formal difference-in-differences results, shown in table 11, confirm that this apparent trend is significant, but only for customer cancellations after one or two years. Estimated coefficients on the post-IMD trend variable using this measure of cancellations are positive and significantly different from zero at the 5 or 10 percent confidence level for each sample. For the other cancellation variables, the post-IMD dummy and trend variables look more like those in table 10: negative, very close to zero in magnitude, and not statistically different from zero.

[Insert Figure 3a and Table 11 here]

To check the robustness of results for luxury sales, we examine difference-in-differences for each type of insurance separately (home insurance, home contents insurance, and accident insurance).³³ Figure 3b shows the annual differences in luxury sales rates across channels (DC-EA) for each insurance type. Channel differences in these measures are again much more varied than those for cancellations. There are no common patterns or trends across the different types of insurance and no common pattern of effects of the IMD. More specifically, rates of luxury sales are higher in the DC channel than the EA channel for home insurance contracts, but are generally lower in the DC channel for home contents insurance and accident insurance. The only notable change in the post-IMD period is that the rate of luxury product sales in accident insurance difference becomes positive in 2010 – meaning that luxury sales in the EA channel decrease dramatically relative to the DC channel.

The formal difference-in-differences estimates reported in table 12 confirm the lack of strong patterns or effects of the IMD: although now positive in sign as expected under the quality-improvement hypothesis, none of the coefficient estimates on the post-IMD dummy or trend variables are statistically significant. These results are similar to our earlier estimates of luxury product sales – we find no statistically significant effects of the IMD on this aspect of agent service quality – and thus our basic results are robust to this specification check.

[Insert Figure 3b and Table 12 here]

8. Conclusion

Economic theory does not provide clear predictions regarding the net benefits of occupational licensing requirements, nor does it provide solutions of how such regulatory actions

³³ There are nearly twice as many home contents policies as home insurance or accident policies; thus, the data in figure 2b and table 10 are more reflective of the patterns seen in home contents insurance.

should be designed. The outcomes of licensing policies are often quite uncertain and depend crucially on the specifics of the licensing requirements and their implementation. In this study, we analyze the effectiveness of the EU Directive on Insurance Mediation (IMD), a law that was introduced to regulate access to the European insurance intermediary market as well as the conduct of business of intermediaries operating in this market. We focus on the question of whether the law, as it was implemented in Germany, met the original intentions of raising the quality of intermediation services.

Because many insurance agents exited the market after the implementation of the Directive, one measure of its effectiveness in increasing agent quality is to determine whether those agents who exited were of lower quality than agents who remained in the market. Another measure is to determine whether those agents who remained offered higher service quality after the Directive than before. We test these hypotheses with data on exclusive agents and their portfolios of insurance contracts from a single insurer, using end-of-term customer cancellations and sale of luxury policies as our primary proxies for intermediation quality.

The research results using both of these quality measures suggest that exclusive agents who exited the market due to licensing were not of intrinsically lower quality than the agents who remained. Results for those exclusive agents who remained in the market show that licensing resulted in a statistically significant increase in agent service quality – but only when measured by (low rates of) short-term customer-initiated cancellations. Finally, our data reveal a post-IMD rise in cancellation rates of insurance contracts sold by all agents and sales channels. The patterns in the data suggest that consumer search intensity increased as a result of agent licensing, and customers of exiting agents were particularly likely to search. Because exiting agents were not of lower quality than those who remained, and because licensing dramatically reduced the number of agents in the market, the benefits of this search to consumers are unclear.

The goals of the IMD are clearly oriented toward protecting consumers. Because insurance is intangible, often not easy to understand, but important for protecting wealth, intermediaries deserve attention from regulators. However, whether the desired goals of regulations are actually achieved should be closely examined. The results of this investigation suggest the need for additional research into the impact of the licensing regime on the business conduct of insurance intermediaries and the insurance choices of consumers.

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Table 1: Sample Observations by Year

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Number of all Agents | 2,273 | 2,502 | 2,644 | 2,843 | 1,399 | 1,151 | 1,037 |
| Number of contracts | 361,112 | 357,102 | 353,565 | 349,625 | 344,917 | 339,022 | 331,924 |
| Number of customers | 182,759 | 183,178 | 183,359 | 183,405 | 181,025 | 178,075 | 174,606 |
| Number of all Exclusive Agents (EAs) | 1,935 | 2,121 | 2,223 | 2,388 | 994 | 805 | 742 |
| Professional | 1,453 | 1,610 | 1,691 | 1,852 | 491 | 436 | 387 |
| Office-worker | 482 | 511 | 532 | 536 | 503 | 369 | 355 |
| Number of contracts advised by EAs | 142,381 | 149,191 | 157,013 | 157,548 | 118,871 | 115,144 | 113,021 |
| Number of customers advised by EAs | 79,960 | 85,416 | 91,690 | 94,161 | 70,512 | 67,268 | 65,382 |

Table 2: Customer Characteristics

| Variable | All exclusive agents | | Professional Agents | |
|--|-----------------------------|------------------|----------------------------|------------------|
| | Mean | Std. Dev. | Mean | Std. Dev. |
| Average customer age | 51.97 | 16.38 | 51.78 | 16.18 |
| Percent of customers who are female | 0.43 | 0.49 | 0.43 | 0.49 |
| Percent of customers who are public employees | 0.73 | 0.44 | 0.74 | 0.44 |
| Average distance to customers | 27.36 | 110.72 | 23.23 | 95.62 |
| Percent of customers who live in county of insurer | 0.91 | 0.29 | 0.92 | 0.28 |
| Percent of customers who pay via direct debit | 0.78 | 0.41 | 0.78 | 0.41 |
| average number of contracts | 2.17 | 1.38 | 2.23 | 1.40 |

Table 3: Agent Characteristics

| Agent Characteristics | All exclusive agents | | Professional agents | | |
|--|-------------------------|--------------------|-------------------------|--------------------|-------------|
| | Agents who remain | Agents who exit | Agents who remain | Agents who exit | |
| Agent age | 43.8251 | 48.3848 | *** | 49.1556 | 48.1044 * |
| Average duration of policies serviced | 12.6837 | 12.8256 | | 13.2311 | 12.1941 *** |
| Number of new contracts (total 2004-2007) | 11.4492 | 5.0197 | *** | 17.7245 | 5.7627 *** |
| Share of policies that are liability insurance | 0.4805 | 0.4652 | * | 0.4352 | 0.4524 * |
| Share of polices that are home insurance | 0.1487 | 0.1629 | * | 0.1718 | 0.1738 |
| Share of policies that are home contents insurance | 0.2737 | 0.2505 | *** | 0.2673 | 0.2510 * |
| Share of policies that are accident insurance | 0.0971 | 0.1214 | *** | 0.1258 | 0.1228 |
| Share of policies that are high-coverage | 0.1306 | 0.1308 | | 0.1548 | 0.1434 |
| Average end-of-term cancellation rate | 0.0083 | 0.0104 | | 0.0110 | 0.0090 |
| Average all-policies cancellation rate | 0.0013 | 0.0033 | * | 0.0015 | 0.0024 |

Table 4: Share of luxury policies

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Liability Insurance | - | - | - | - | 2.4% | 8.4% | 14.8% |
| Home Insurance | 16.2% | 17.8% | 16.1% | 16.4% | 16.8% | 16.9% | 17.1% |
| Home Contents Insurance | 6.3% | 13.6% | 18.8% | 23.3% | 29.9% | 35.0% | 39.1% |
| Accident Insurance | - | 5.0% | 9.4% | 12.4% | 16.8% | 21.6% | 25.0% |

Table 5: Annual Cancellation Rates

| Reason for cancellation | Cancellation rates | | | | | | |
|---------------------------------|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| By Customer | | | | | | | |
| End-of-term | 0.01786 | 0.01359 | 0.01323 | 0.01481 | 0.01845 | 0.02212 | 0.02198 |
| After premium increase | 0.00000 | 0.00000 | 0.00009 | 0.00246 | 0.00001 | 0.00001 | 0.00035 |
| After claim | 0.00009 | 0.00011 | 0.00011 | 0.00009 | 0.00010 | 0.00016 | 0.00019 |
| Within two weeks | 0.00000 | 0.00002 | 0.00006 | 0.00029 | 0.00037 | 0.00048 | 0.00052 |
| No more risk | 0.01474 | 0.01505 | 0.01461 | 0.01109 | 0.01279 | 0.01109 | 0.00989 |
| <i>Total customer-initiated</i> | <i>0.03270</i> | <i>0.02877</i> | <i>0.02810</i> | <i>0.02874</i> | <i>0.03172</i> | <i>0.03386</i> | <i>0.03293</i> |
| By Insurer | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| End-of-term | 0.00008 | 0.00016 | 0.00127 | 0.00021 | 0.00006 | 0.00004 | 0.00002 |
| After claim | 0.00043 | 0.00059 | 0.00036 | 0.00039 | 0.00034 | 0.00031 | 0.00022 |
| Within two weeks | 0.00052 | 0.00039 | 0.00030 | 0.00013 | 0.00002 | 0.00001 | 0.00000 |
| <i>Total insurer-initiated</i> | <i>0.00103</i> | <i>0.00114</i> | <i>0.00194</i> | <i>0.00073</i> | <i>0.00043</i> | <i>0.00036</i> | <i>0.00024</i> |
| Annual Cancellation Rate | 0.03372 | 0.02991 | 0.03003 | 0.02947 | 0.03215 | 0.03422 | 0.03317 |

Table 6: Probit Estimates of Agent Exit after IMD

| VARIABLES | All Exclusive Agents | | | | | All Professional Agents | | | | | Full-time Professional Agents | | | | |
|--|------------------------|------------------------|----------------------------|----------------------------|----------------------------|-------------------------|-------------------------|----------------------------|----------------------------|----------------------------|-------------------------------|----------------------|----------------------------|----------------------------|----------------------------|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| Professional Agent | 0.504*** (0.0247) | 0.508*** (0.0249) | 0.585*** (0.0283) | 0.598*** (0.0282) | 0.597*** (0.0282) | | | | | | | | | | |
| Agent cancellation rate | 8.17e-05 (0.000316) | | 0.000595 (0.000540) | | 0.000530 (0.000547) | -5.57e-06 (0.000448) | | -5.26e-06 (0.000492) | | -9.56e-05 (0.000485) | 0.00291* (0.00150) | | 0.00226 (0.00158) | | 0.00124 (0.00161) |
| Proportion of high-coverage contracts | | -0.0425 (0.0505) | | -0.202*** (0.0733) | -0.198*** (0.0731) | | 0.00701 (0.0452) | | -0.0880 (0.0658) | -0.0894 (0.0657) | | -0.598*** (0.182) | | -0.647*** (0.226) | -0.614*** (0.230) |
| Agent age | 0.00229** (0.00107) | 0.00218** (0.00108) | 0.00489*** (0.00126) | 0.00467*** (0.00126) | 0.00462*** (0.00126) | -0.00231** (0.00108) | -0.00229** (0.00108) | 0.000560 (0.00125) | 0.000429 (0.00124) | 0.000440 (0.00125) | 0.00353* (0.00196) | 0.00222 (0.00202) | 0.00666*** (0.00202) | 0.00551** (0.00222) | 0.00544** (0.00222) |
| Agent gender | 0.128*** (0.0228) | 0.129*** (0.0229) | 0.133*** (0.0248) | 0.137*** (0.0247) | 0.138*** (0.0247) | 0.133*** (0.0206) | 0.133*** (0.0208) | 0.139*** (0.0223) | 0.142*** (0.0221) | 0.142*** (0.0221) | 0.193*** (0.0365) | 0.209*** (0.0363) | 0.202*** (0.0374) | 0.215*** (0.0369) | 0.216*** (0.0368) |
| Agent over age 60 | 0.188*** (0.0409) | 0.188*** (0.0408) | 0.252*** (0.0354) | 0.253*** (0.0351) | 0.254*** (0.0349) | 0.113*** (0.0315) | 0.113*** (0.0315) | 0.167*** (0.0285) | 0.168*** (0.0282) | 0.168*** (0.0282) | 0.117* (0.0617) | 0.135** (0.0602) | 0.187*** (0.0618) | 0.201*** (0.0598) | 0.202*** (0.0596) |
| Number of contracts in agent's portfolio | | | -0.000572*** (0.000113) | -0.000577*** (0.000114) | -0.000577*** (0.000114) | | | -0.000408*** (8.57e-05) | -0.000410*** (8.61e-05) | -0.000410*** (8.62e-05) | | | -0.000361*** (8.88e-05) | -0.000370*** (8.97e-05) | -0.000368*** (8.94e-05) |
| Number of contracts per customer | | | -0.125*** (0.0350) | -0.123*** (0.0348) | -0.121*** (0.0348) | | | -0.108*** (0.0280) | -0.106*** (0.0281) | -0.106*** (0.0282) | | | -0.363*** (0.107) | -0.332*** (0.108) | -0.336*** (0.108) |
| Proportion of new contracts | | | -0.0599*** (0.0206) | -0.0501** (0.0198) | -0.0486** (0.0197) | | | -0.0432*** (0.0164) | -0.0381** (0.0163) | -0.0383** (0.0164) | | | -0.0464* (0.0260) | -0.0159 (0.0255) | -0.0151 (0.0255) |
| Observations | 2,006 | 2,006 | 1,756 | 1,756 | 1,756 | 1,504 | 1,504 | 1,302 | 1,302 | 1,302 | 794 | 794 | 777 | 777 | 777 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Probit Estimates of Contract Level Quality Indicators, Exiting vs. Non-Exiting Agents, 2004-2006

| VARIABLES | Dependent Variable: Cancel Dummy | | | Dependent Variable: Luxury Product Dummy | | |
|--|----------------------------------|---------------------------|---|--|--------------------------|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Full Sample | Professional Agents | Professional Agents with more than 15 contracts | Full Sample | Professional Agents | Professional Agents with more than 15 contracts |
| Agent-Exit Dummy | 0.00412*** (0.000744) | 0.00422*** (0.000767) | 0.00403*** (0.000765) | -0.0134 (0.0194) | -0.0137 (0.0206) | -0.0196 (0.0211) |
| Professional Agent | -0.00357*** (0.00108) | | | 0.0358** (0.0156) | | |
| Age Difference (Agent Age - Customer Age) | 9.16e-05*** (2.62e-05) | 6.96e-05*** (2.66e-05) | 7.22e-05*** (2.68e-05) | -0.000308 (0.000938) | -0.000563 (0.00108) | -0.000522 (0.00111) |
| Distance Between Agent and Customer in km | 1.66e-07 (8.73e-07) | 9.67e-07 (7.35e-07) | 6.69e-07 (7.72e-07) | 9.14e-05** (4.57e-05) | 0.000102** (4.30e-05) | 0.000102** (4.33e-05) |
| Policy Duration in Years | 0.000185*** (2.11e-05) | 0.000185*** (2.00e-05) | 0.000182*** (2.00e-05) | | | |
| Customer Receives Public Employee Discount | -0.000513 (0.000366) | -0.000416 (0.000384) | -0.000401 (0.000385) | 0.0142 (0.0105) | 0.0214* (0.0115) | 0.0270** (0.0115) |
| Customer Age | 9.11e-06 (2.65e-05) | -5.28e-06 (2.83e-05) | -4.16e-06 (2.85e-05) | -0.00292*** (0.000998) | -0.00319*** (0.00116) | -0.00313*** (0.00119) |
| Customer Pays Via Direct Debit | -0.00186*** (0.000442) | -0.00217*** (0.000443) | -0.00204*** (0.000441) | 0.0494*** (0.0115) | 0.0503*** (0.0130) | 0.0507*** (0.0131) |
| Customer Lives In The Same Region As Insurer | 0.00154*** (0.000494) | 0.00135** (0.000562) | 0.00125** (0.000565) | 0.0321 (0.0203) | 0.0412* (0.0213) | 0.0444** (0.0217) |
| Home Contents Insurance Dummy | 0.000143 (0.000302) | 0.000130 (0.000327) | 0.000143 (0.000329) | 0.0669** (0.0291) | 0.0766** (0.0322) | 0.0781** (0.0326) |
| Home Insurance Dummy | -0.00209*** (0.000432) | -0.00182*** (0.000478) | -0.00181*** (0.000481) | -0.500*** (0.0222) | -0.500*** (0.0237) | -0.497*** (0.0242) |
| Accident Insurance Dummy | 0.0108*** (0.000893) | 0.0105*** (0.000949) | 0.0104*** (0.000948) | | | |
| Year 2005 | -0.000887*** (0.000330) | -0.00117*** (0.000365) | -0.00115*** (0.000367) | 0.00696 (0.0131) | 0.00697 (0.0147) | 0.0104 (0.0148) |
| Year 2006 | -0.000440 (0.000381) | -0.000880** (0.000398) | -0.000864** (0.000400) | -0.0851*** (0.0140) | -0.0835*** (0.0159) | -0.0821*** (0.0160) |
| Observations | 369,133 | 297,312 | 294,564 | 17,661 | 14,903 | 14,656 |
| Robust standard errors in parentheses | | | | | | |
| *** p<0.01, ** p<0.05, * p<0.1 | | | | | | |

Table 8: Probit Estimates of Post-IMD Change in Contract Level Quality Indicators for Non-existing Agents, 2004-2010

| VARIABLES | Dependent Variable: Cancel Dummy | | | Dependent Variable: Luxury Product Dummy | | |
|--|----------------------------------|----------------------------|---|--|------------------------|---------------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Full Sample | Professional Agents | Professional Agents with more than 15 contracts | Full Sample | Professional Agents | Professional Agents with more than 15 |
| Professional Agent | -0.000326 (0.000934) | | | 0.0145 (0.0182) | | |
| Age Difference (Agent Age - Customer Age) | 1.96e-05 (2.83e-05) | -2.50e-06 (2.96e-05) | -9.05e-07 (3.01e-05) | -0.000544 (0.000804) | -0.000559 (0.00104) | -0.000501 (0.00108) |
| Distance Between Agent and Customer in km | 2.23e-06*** (7.86e-07) | 2.13e-06* (1.10e-06) | 1.93e-06* (1.07e-06) | -3.17e-05 (6.70e-05) | 4.33e-05 (4.65e-05) | 3.91e-05 (4.78e-05) |
| Policy Duration in Years | 0.000305*** (1.54e-05) | 0.000310*** (1.83e-05) | 0.000294*** (1.81e-05) | - | - | - |
| Customer Receives Public Employee Discount | 0.00149*** (0.000309) | 0.00178*** (0.000370) | 0.00164*** (0.000376) | 0.000427 (0.00706) | 0.00542 (0.00874) | 0.00983 (0.00912) |
| Customer Age | -9.03e-05*** (2.94e-05) | -0.000102*** (3.36e-05) | -9.74e-05*** (3.42e-05) | -0.00108 (0.000856) | -0.00117 (0.00111) | -0.00111 (0.00115) |
| Customer Pays Via Direct Debit | -0.00188*** (0.000301) | -0.00176*** (0.000364) | -0.00178*** (0.000367) | 0.0550*** (0.00710) | 0.0568*** (0.00887) | 0.0549*** (0.00917) |
| Customer Lives In The Same Region As Insurer | -0.00183*** (0.000594) | -0.00266*** (0.000778) | -0.00275*** (0.000788) | 0.0235 (0.0152) | 0.0326** (0.0160) | 0.0314* (0.0163) |
| Home Contents Insurance Dummy | -0.000512** (0.000206) | -0.000736*** (0.000233) | -0.000687*** (0.000235) | 0.540*** (0.0165) | 0.577*** (0.0146) | 0.593*** (0.0147) |
| Home Insurance Dummy | -0.00323*** (0.000390) | -0.00341*** (0.000441) | -0.00348*** (0.000443) | -0.0725*** (0.0218) | -0.00989 (0.0197) | 0.00104 (0.0205) |
| Accident Insurance Dummy | 0.00631*** (0.000513) | 0.00603*** (0.000533) | 0.00605*** (0.000538) | 0.455*** (0.0310) | 0.495*** (0.0285) | 0.504*** (0.0303) |
| Post Regulation Dummy | 0.00773*** (0.000422) | 0.00788*** (0.000400) | 0.00774*** (0.000407) | 0.243*** (0.0101) | 0.233*** (0.0112) | 0.242*** (0.0123) |
| Observations | 781,432 | 564,494 | 554,872 | 45,474 | 31,363 | 29,748 |
| Robust standard errors in parentheses | | | | | | |
| *** p<0.01, ** p<0.05, * p<0.1 | | | | | | |

Table 9: Yearly Probit Estimates Contract-Level End-of-Term Cancellations for All Exclusive Agents

| | (1) | (2) | (3) |
|----------------------------|-------------------------|------------------------|---|
| | Full Sample | Professional Agents | Professional Agents with more than 15 contracts |
| Agent-Exit Dummy Year 2004 | 8.49e-05 (0.000479) | 0.000156 (0.000522) | 0.000168 (0.000531) |
| Agent-Exit Dummy Year 2005 | 0.000435 (0.000364) | 0.000387 (0.000406) | 0.000413 (0.000415) |
| Agent-Exit Dummy Year 2006 | 9.41e-05 (0.000415) | 0.000122 (0.000434) | 0.000152 (0.000448) |
| Agent-Exit Dummy Year 2007 | 0.000844 (0.000707) | 0.000821 (0.000782) | 0.000939 (0.000797) |
| Agent-Exit Dummy Year 2008 | 0.00187 (0.00119) | 0.00284** (0.00128) | 0.00307* (0.00165) |
| Agent-Exit Dummy Year 2009 | 0.00536*** (0.00139) | 0.00188 (0.00128) | 0.00431*** (0.00164) |
| Agent-Exit Dummy Year 2010 | 0.00419*** (0.00104) | 0.00339** (0.00161) | 0.00632*** (0.00242) |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 10: DD Estimates of Post-IMD Change in Non-Exiting Agent Quality, 2004-2010

| Dependent Variable | Estimated Effect of IMD | | |
|---|-------------------------|-----------|-------|
| | Coef. | Std. Err. | P> t |
| Direct Channel - EA Channel Cancellation Rate | | | |
| End-of-term cancellation - dummy regression | | | |
| all exclusive agents who stay after 2008 | -0.00196 | 0.00443 | 0.677 |
| professional agents who stay after 2008 | -0.00316 | 0.00431 | 0.496 |
| professional agents with more than 14 contracts who stay after 2008 | -0.00313 | 0.00435 | 0.504 |
| End-of-term cancellation - trend regression | | | |
| all exclusive agents who stay after 2008 | -0.00010 | 0.00199 | 0.961 |
| professional agents who stay after 2008 | -0.00060 | 0.00198 | 0.775 |
| professional agents with more than 14 contracts who stay after 2008 | -0.00055 | 0.00199 | 0.795 |
| Proportion of luxury products - dummy regression | | | |
| all exclusive agents who stay after 2008 | -0.08226 | 0.02915 | 0.037 |
| professional agents who stay after 2008 | -0.05537 | 0.03400 | 0.164 |
| professional agents with more than 14 contracts who stay after 2008 | -0.05720 | 0.03238 | 0.138 |
| Proportion of luxury products - trend regression | | | |
| all exclusive agents who stay after 2008 | -0.02700 | 0.01675 | 0.168 |
| professional agents who stay after 2008 | -0.01991 | 0.01622 | 0.274 |
| professional agents with more than 14 contracts who stay after 2008 | -0.02161 | 0.01537 | 0.219 |

Table 11: DD Estimates of Post-IMD Change in Various Cancellation Rates for Non-Exiting Agents, 2004-2010

| Dependent Variable | Estimated Effect of IMD | | |
|---|--------------------------------|------------------|-----------------|
| Direct Channel - EA Channel Alternative Cancellation Rates | Coef. | Std. Err. | P> t |
| Cancellation after one or two years - dummy regression | | | |
| All exclusive agents who stay after 2008 | 0.00266 | 0.00241 | 0.319 |
| Professional agents who stay after 2008 | 0.00235 | 0.00235 | 0.363 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.00235 | 0.00235 | 0.363 |
| Cancellation after one or two years - trend regression | | | |
| All exclusive agents who stay after 2008 | 0.00202 | 0.00076 | 0.046 |
| Professional agents who stay after 2008 | 0.00185 | 0.00077 | 0.062 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.00185 | 0.00077 | 0.062 |
| Cancellations except no more risk - dummy regression | | | |
| All exclusive agents who stay after 2008 | -0.00260 | 0.00442 | 0.581 |
| Professional agents who stay after 2008 | -0.00381 | 0.00432 | 0.419 |
| Professional agents with more than 14 contracts who stay after 2008 | -0.00386 | 0.00437 | 0.417 |
| Cancellations except no more risk - trend regression | | | |
| All exclusive agents who stay after 2008 | -0.00041 | 0.00200 | 0.844 |
| Professional agents who stay after 2008 | -0.00094 | 0.00200 | 0.659 |
| Professional agents with more than 14 contracts who stay after 2008 | -0.00090 | 0.00202 | 0.674 |
| Cancellation of all policies - dummy regression | | | |
| All exclusive agents who stay after 2008 | -0.00334 | 0.00270 | 0.271 |
| Professional agents who stay after 2008 | -0.00328 | 0.00224 | 0.203 |
| Professional agents with more than 14 contracts who stay after 2008 | -0.00342 | 0.00228 | 0.194 |
| Cancellation of all policies - trend regression | | | |
| All exclusive agents who stay after 2008 | -0.00012 | 0.00135 | 0.933 |
| Professional agents who stay after 2008 | -0.00031 | 0.00117 | 0.800 |
| Professional agents with more than 14 contracts who stay after 2008 | -0.00034 | 0.00120 | 0.785 |

Table 12: DD Estimates of Post-IMD Change in Luxury Proportions by Line for Non-Exiting Agents, 2004-2010

| Dependent Variable | Estimated Effect of IMD | | |
|---|--------------------------------|------------------|-----------------|
| Direct Channel - EA Channel Proportion of Luxury Products | Coeff. | Std. Err. | P> t |
| Accident Insurance - dummy regression | | | |
| All exclusive agents who stay after 2008 | 0.02835 | 0.12203 | 0.828 |
| Professional agents who stay after 2008 | 0.08617 | 0.12951 | 0.542 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.08480 | 0.13519 | 0.565 |
| | | | |
| Accident Insurance - trend regression | | | |
| All exclusive agents who stay after 2008 | 0.03875 | 0.04954 | 0.478 |
| Professional agents who stay after 2008 | 0.05624 | 0.05199 | 0.340 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.05711 | 0.05430 | 0.352 |
| | | | |
| Home Insurance - dummy regression | | | |
| All exclusive agents who stay after 2008 | 0.04867 | 0.04440 | 0.323 |
| Professional agents who stay after 2008 | 0.03815 | 0.04949 | 0.476 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.03908 | 0.04985 | 0.468 |
| | | | |
| Home Insurance - trend regression | | | |
| All exclusive agents who stay after 2008 | 0.01745 | 0.02030 | 0.429 |
| Professional agents who stay after 2008 | 0.01072 | 0.02253 | 0.654 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.01057 | 0.02275 | 0.662 |
| | | | |
| Home Contents Insurance - dummy regression | | | |
| All exclusive agents who stay after 2008 | -0.02156 | 0.02242 | 0.380 |
| Professional agents who stay after 2008 | 0.02031 | 0.02396 | 0.435 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.00850 | 0.02407 | 0.738 |
| | | | |
| Home Contents Insurance - trend regression | | | |
| All exclusive agents who stay after 2008 | -0.00321 | 0.01064 | 0.775 |
| Professional agents who stay after 2008 | 0.01364 | 0.00948 | 0.210 |
| Professional agents with more than 14 contracts who stay after 2008 | 0.00754 | 0.01018 | 0.492 |

Figure 1: Contracts per Agent

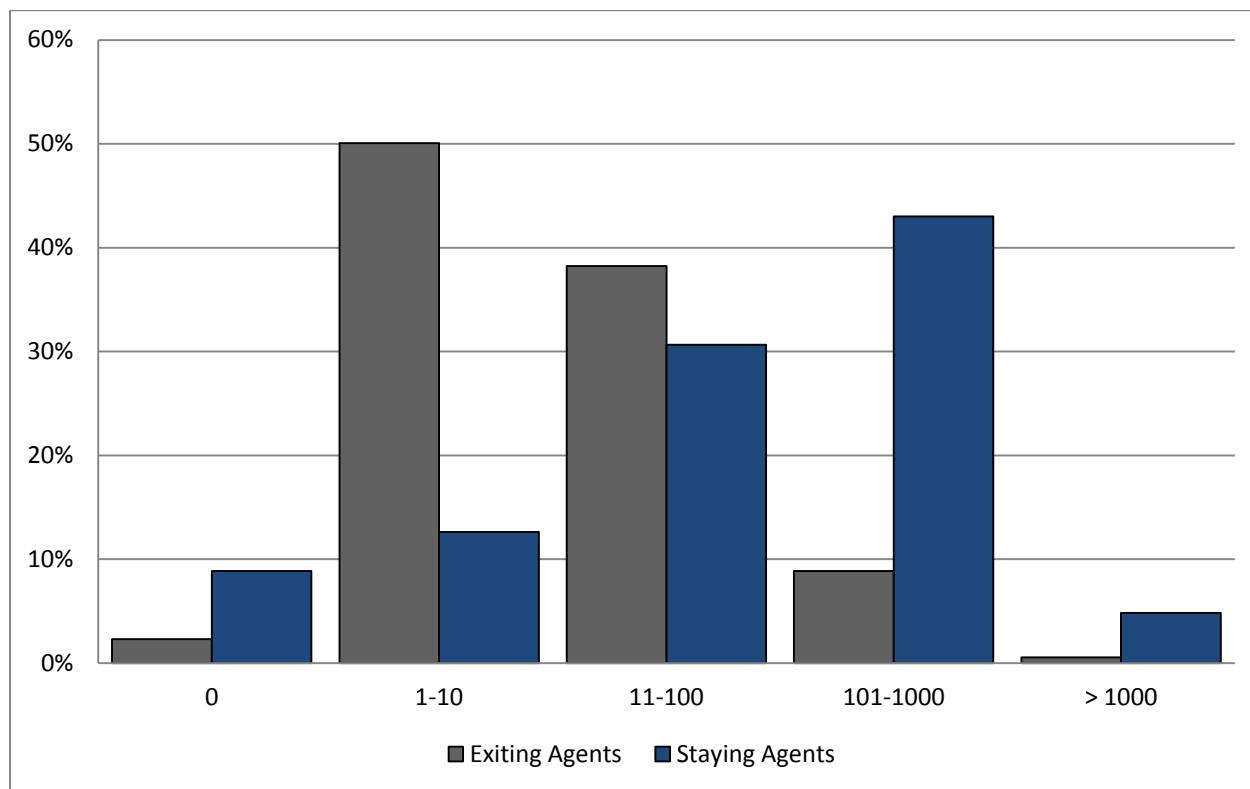


Figure 2a: Annual Average End-of-Term Cancellations

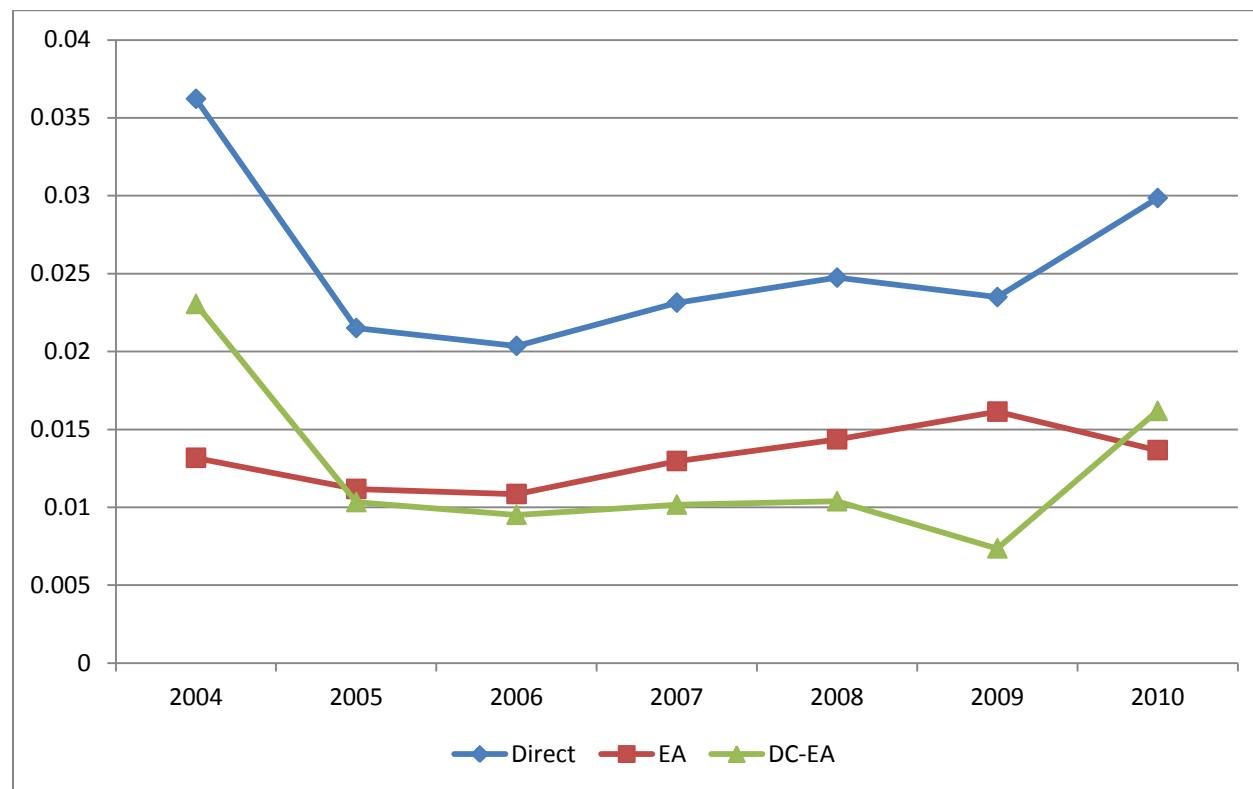


Figure 2b: Annual Proportion of Luxury Policies

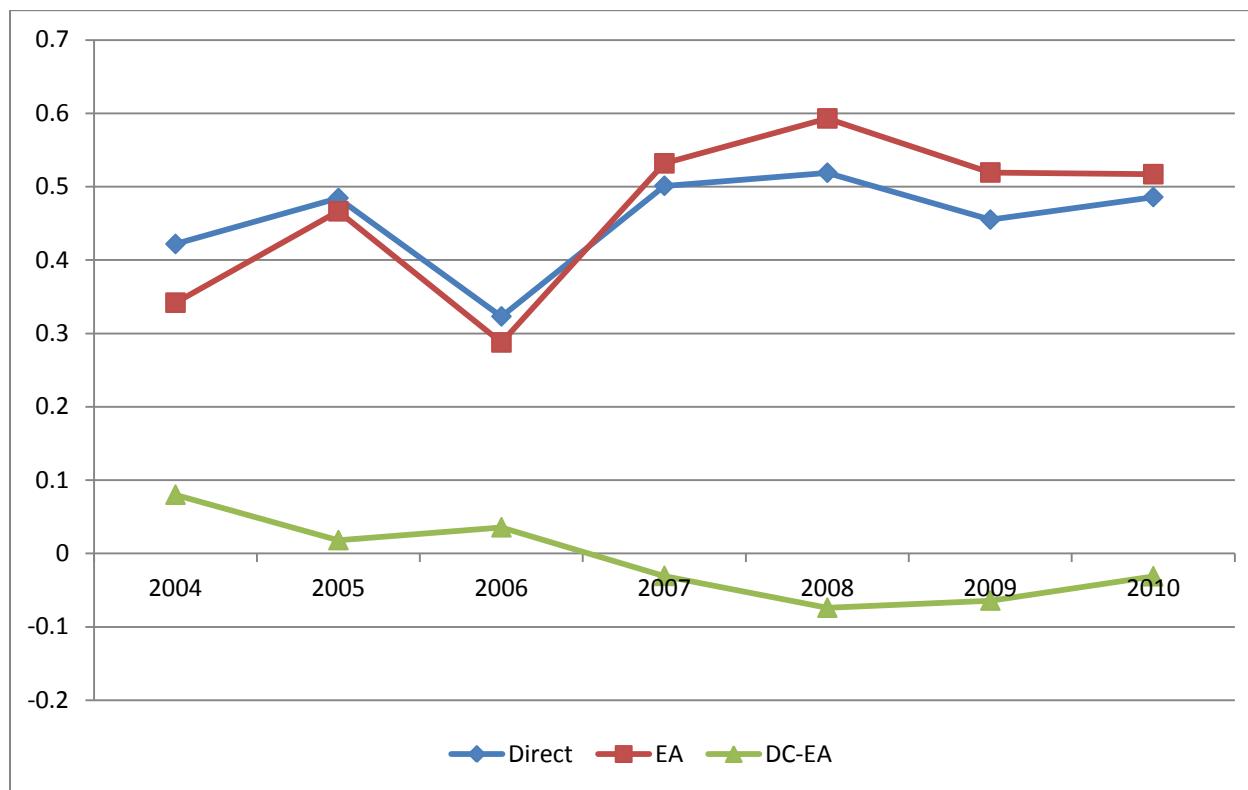


Figure 3a: Average Annual Cancellation Rate Differences (DC-EA)

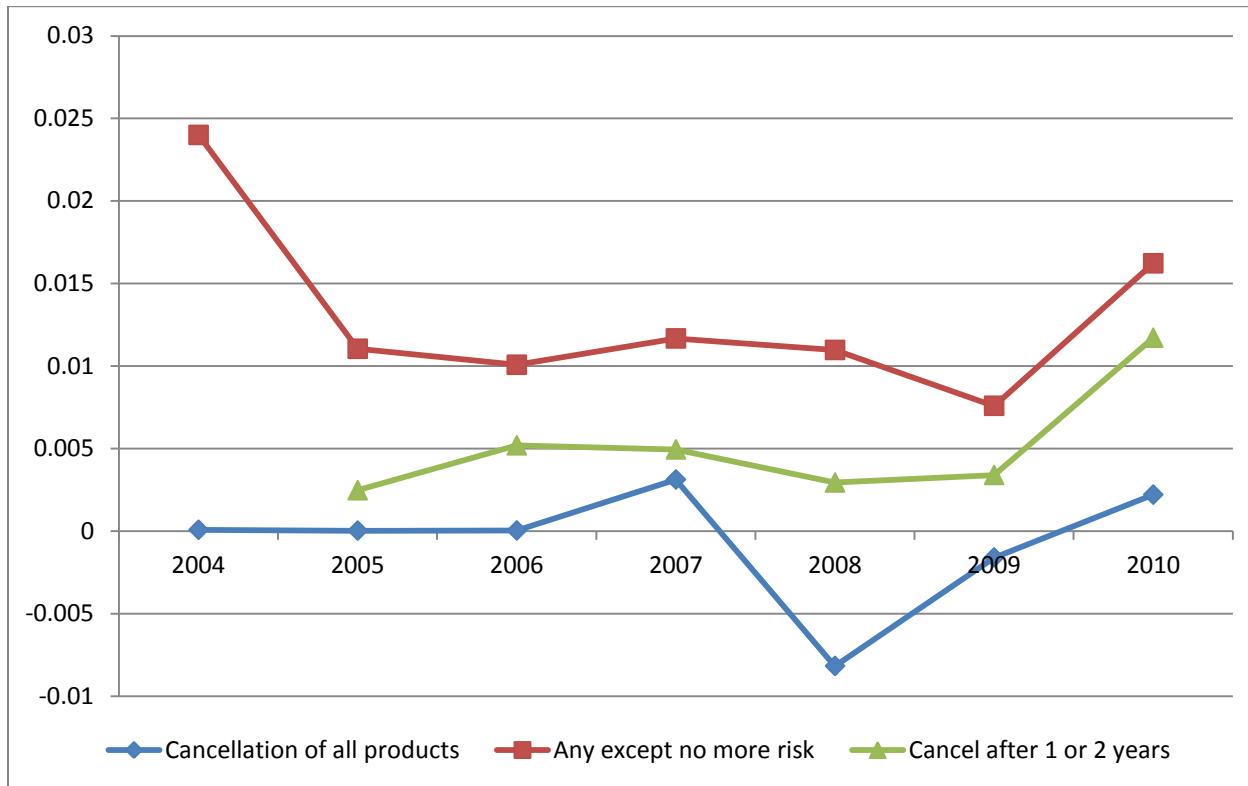
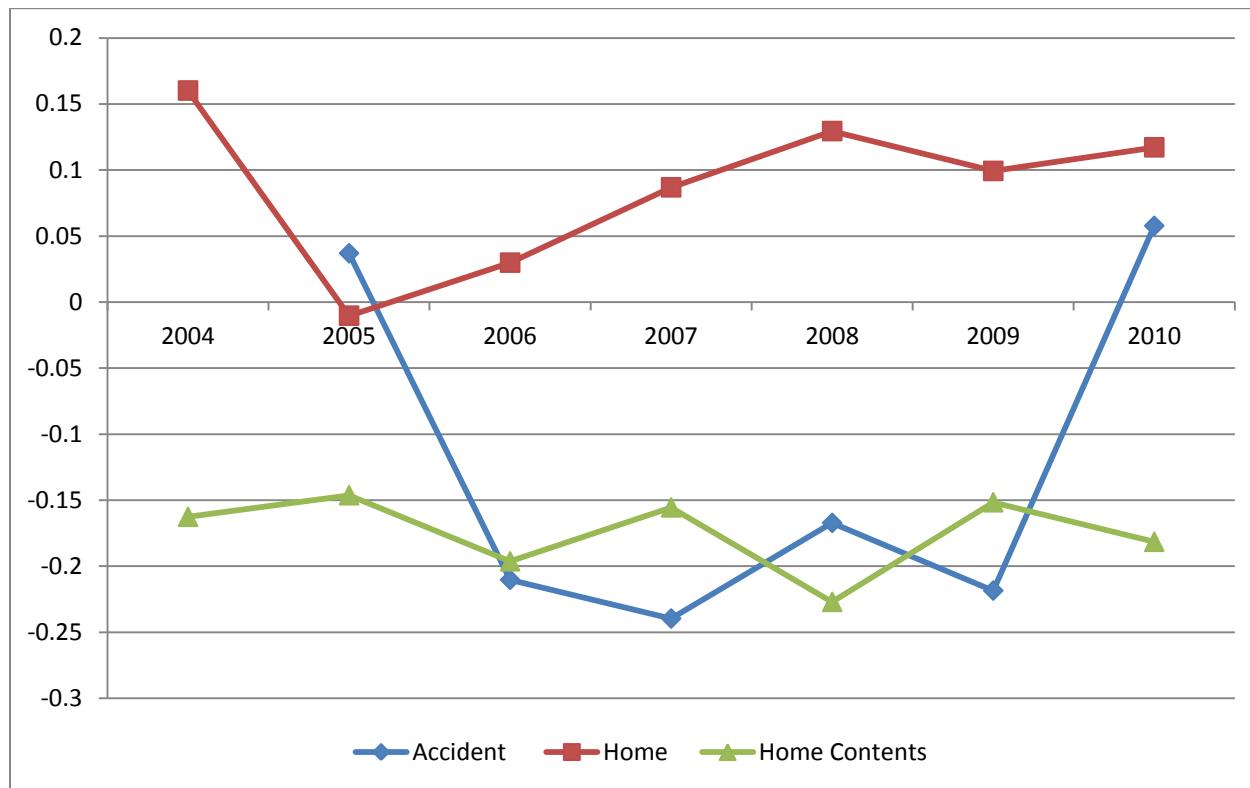
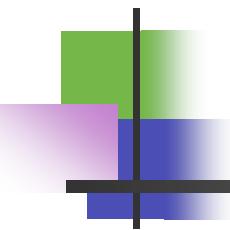


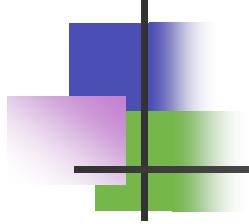
Figure 3b: Differences in Average Annual Rates of Luxury Products (DC-EA)





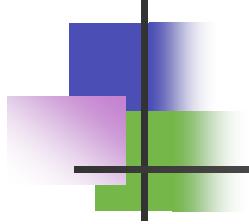
Qualification, Training, and Continuing Education for Insurance Salespersons in Taiwan

Tsai-Jyh Chen
National Chengchi University



Outline of Presentation

- Overview of Ins. Market in Taiwan
- Qualification for Ins. Salespersons
- Training and Continuing Education
- Performance of Salespersons of life insurance
- Case: Cathay Life Insurance Co.
- Concluding Remark



1. Ins Market in Taiwan

Year 2014

- No. of ins. Companies:
 - Life:29
 - Non-life:22
- No. of agency, brokers, and sales
 - Agency:312
 - Broker: 488
 - Salesperson: approx. 335,000
2015/11/11

1. Ins Market in Taiwan

Global Ranking of Premium Income in 2014

| Country | Total | | | | Non-Life Insurance | | | Life Insurance | | |
|--------------------|---------|----------------|----------|---------|--------------------|----------|---------|----------------|----------|--|
| | Ranking | Premium income | Shares % | Ranking | Premium income | Shares % | Ranking | Premium income | Shares % | |
| U.S. | 1 | 1,280,443 | 26.80 | 1 | 752,222 | 35.42 | 1 | 528,221 | 19.90 | |
| Japan | 2 | 479,762 | 10.04 | 5 | 108,174 | 5.09 | 2 | 371,588 | 14.00 | |
| U.K. | 3 | 351,266 | 7.35 | 4 | 115,945 | 5.46 | 3 | 235,321 | 8.86 | |
| PR China | 4 | 328,440 | 6.87 | 2 | 151,490 | 7.13 | 4 | 176,950 | 6.67 | |
| France | 5 | 270,520 | 5.66 | 6 | 97,759 | 4.60 | 5 | 172,761 | 6.51 | |
| Germany | 6 | 254,645 | 5.33 | 3 | 136,170 | 6.41 | 7 | 118,475 | 4.46 | |
| Italy | 7 | 194,735 | 4.08 | 10 | 49,443 | 2.33 | 6 | 145,292 | 5.47 | |
| South Korea | 8 | 159,515 | 3.34 | 9 | 57,943 | 2.73 | 8 | 101,572 | 3.83 | |
| Canada | 9 | 125,373 | 2.62 | 8 | 73,235 | 3.45 | 12 | 52,138 | 1.96 | |
| Netherlands | 10 | 95,955 | 2.01 | 7 | 74,100 | 3.49 | 24 | 21,855 | 0.82 | |
| Taiwan | 11 | 95,622 | 2.00 | 18 | 16,466 | 0.78 | 9 | 79,156 | 2.98 | |
| Total in the World | | 4,778,248 | 100.00 | | 2,123,699 | 100.00 | | 2,654,549 | 100.00 | |

1. Ins Market in Taiwan

Insurance Market in Taiwan

| year | ins. density | | world ranking | ins. penetration | | world ranking | avg no. of life policies |
|------|--------------|---------|---------------|------------------|-------|---------------|--------------------------|
| | life | total | | life | toal | | |
| 2002 | 39,487 | 43,991 | 20 | 8.54 | 9.52 | 6 | 1.43 |
| 2003 | 50,106 | 54,949 | 21 | 10.59 | 11.61 | 4 | 1.59 |
| 2004 | 57,671 | 62,760 | 20 | 11.51 | 12.53 | 2 | 1.66 |
| 2005 | 64,021 | 69,225 | 20 | 12.42 | 13.43 | 1 | 1.76 |
| 2006 | 68,353 | 73,340 | 20 | 12.77 | 13.70 | 3 | 1.84 |
| 2007 | 81,675 | 86,579 | 19 | 14.52 | 15.40 | 1 | 1.96 |
| 2008 | 83,294 | 87,971 | 20 | 15.2 | 16.06 | 1 | 2.03 |
| 2009 | 86,790 | 91,195 | 18 | 16.08 | 16.89 | 1 | 2.04 |
| 2010 | 99,855 | 104,423 | 17 | 17.07 | 17.85 | 1 | 2.11 |
| 2011 | 94,647 | 99,514 | 17 | 16.03 | 16.86 | 1 | 2.16 |
| 2012 | 106,294 | 111,461 | 13 | 17.61 | 18.46 | 1 | 2.23 |
| 2013 | 110,530 | 115,874 | 12 | 17.74 | 18.60 | 1 | 2.30 |
| 2014 | 118,253 | 123,895 | 9 | 17.23 | 18.90 | 1 | 2.31 |

1. Ins Market in Taiwan

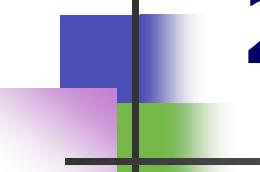
Economic Environment in Taiwan

| year | population (1000) | NI per capita (US\$) | saving rate % | econ. growth % | Life prem growth % | Nonlife prev growth % |
|------|----------------------|-------------------------|------------------|-------------------|-----------------------|-----------------------------|
| 2005 | 22,770 | 14,412 | 27.94 | 4.7 | 11.41 | 2.63 |
| 2006 | 22,877 | 14,724 | 29.55 | 5.44 | 7.27 | -3.71 |
| 2007 | 22,958 | 15,192 | 30.38 | 5.98 | 19.91 | -1.33 |
| 2008 | 23,037 | 15,194 | 28.36 | 0.73 | 2.33 | -4.30 |
| 2009 | 23,120 | 14,255 | 27.62 | -1.81 | 4.57 | -5.46 |
| 2010 | 23,162 | 16,491 | 31.68 | 10.76 | 15.26 | 3.87 |
| 2011 | 23,225 | 17,812 | 29.97 | 4.19 | -4.96 | 6.83 |
| 2012 | 23,316 | 17,894 | 28.83 | 1.48 | 12.75 | 6.59 |
| 2013 | 23,374 | 18,373 | 29.05 | 2.09 | 4.24 | 3.67 |
| 2014 | 23,434 | 19,315 | 31.76 | 3.77 | 7.26 | 5.86 |

Questionnaire: 36 questions

Trust = Credibility, Benevolence, Honesty

- Questions about ins. co.
 - Q1-1. Compared with banks, the financial conditions of insurance companies in general is more sound than banks.
① ② ③ ④ ⑤ ⑥ ⑦
strongly disagree strongly agree
 - Q1-2. In general , insurance companies supply more varieties of products.
 -
- Questions about ins. products
 - Q2-1. Compared with financial products, people need insurance products more.
 -
- Questions about ins. salespersons
 - Q3-1. Compared with bank clerks, insurance salespersons can give more correct description for the products.
 -



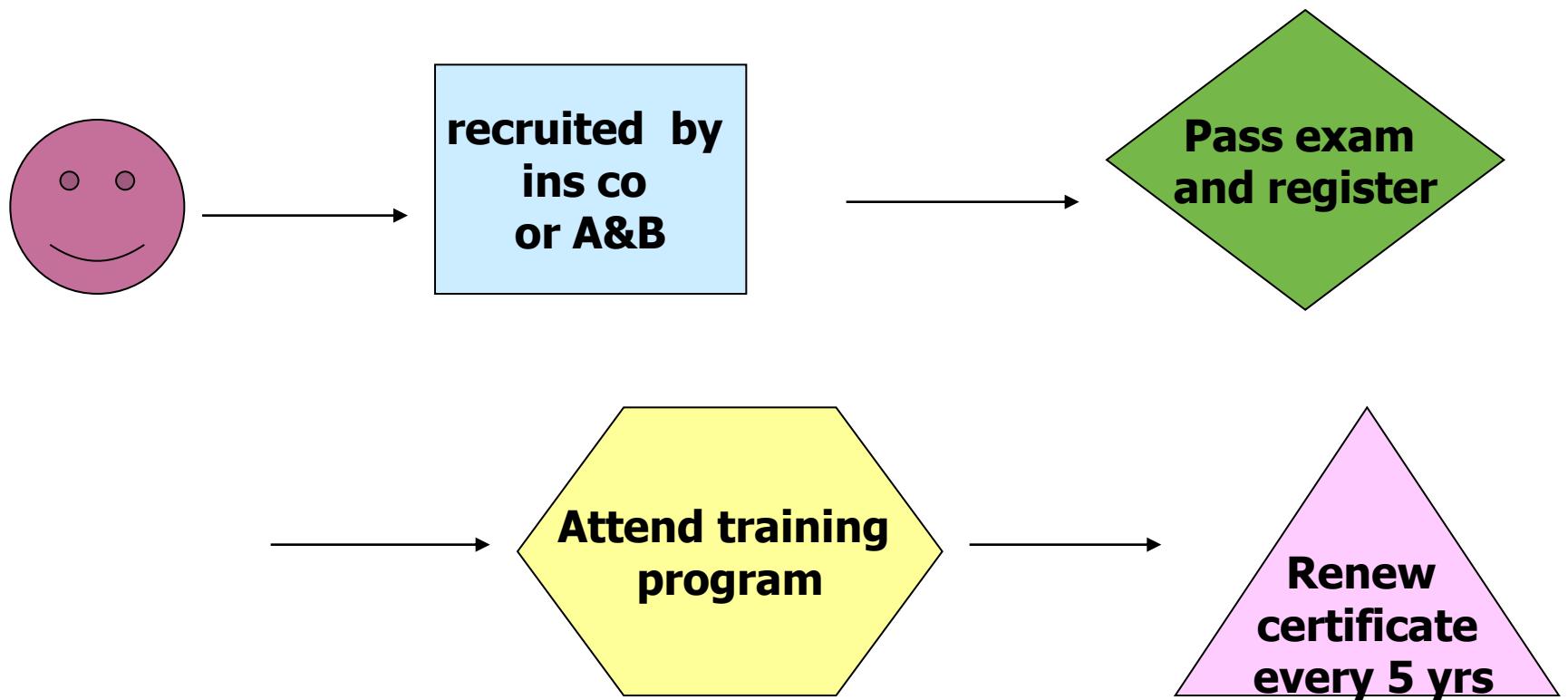
2. Qualification for Ins. Sales

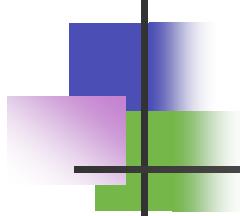
[Regulations governing the supervision of insurance solicitors, RGSIS.]

- **Insurance Solicitation**

- Once registered, a solicitor shall solicit insurance **exclusively** for the employing company.
- Once registered, a solicitor shall attend, on an annual basis, the training providing by the employing company.
- The employing company shall revoke the solicitor registration of a solicitor who has failed to attend training.

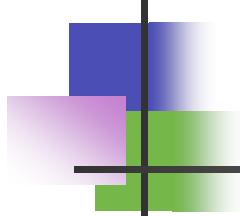
2. Qualification for Ins. Sales





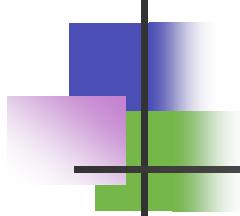
2. Qualification for Ins. Sales

- Applying for Exam
- 1. age: ≥ 20
- 2. education: \geq high school (2011)
- 3. citizen or permanent resident of Taiwan
- 4. not violating article 7 of RGSIS



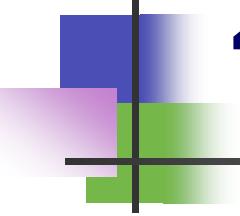
2. Qualification for Ins. Sales

- Application for taking exam:
apply by
 - 1. The ins company which the solicitor
belongs to
 - 2. Broker/Agency trade association if the
solicitor works in a Brokerage/Agency



2. Qualification for Ins. Sales

- Examinations
- A: professional knowledge (2 tests)
 - insurance practices
 - insurance regulations
- B. general knowledge (1 test)
 - introduction to financial market
 - business ethics for financial practitioners



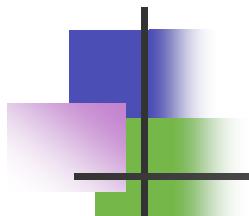
2. Qualification for Ins. Sales

- Criteria for passing exam
- A: professional knowledge:
 - total score of two tests ≥ 140
 - each test score ≥ 60
- B. general knowledge
 - test score ≥ 70
- Pass rate is about 50%
- Registration is about 30%

2. Qualification for Ins. Sales

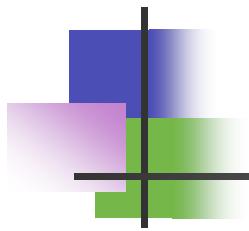
Pass rate and registration of salespersons for life insurance

| year | | persons | | | Index (applicant=100) | | |
|------|------------|---------|--------|--------|-----------------------|--------|-------|
| | | male | female | total | male | female | total |
| 2014 | Applicant | 31,972 | 38,966 | 70,938 | 100 | 100 | 100 |
| | Examinee | 27,541 | 34,013 | 61,554 | 86 | 87 | 87 |
| | Passed | 16,307 | 20,652 | 36,959 | 51 | 53 | 52 |
| | Registered | 10,673 | 12,634 | 23,307 | 33 | 32 | 33 |
| 2013 | Applicant | 32,327 | 39,103 | 71,430 | 100 | 100 | 100 |
| | Examinee | 27,798 | 33,950 | 61,748 | 86 | 87 | 86 |
| | Passed | 15,777 | 19,927 | 35,704 | 49 | 51 | 50 |
| | Registered | 9,488 | 11,218 | 20,706 | 29 | 29 | 29 |



2. Qualification for Ins. Sales

- Life ins solicitor registration began in 1993.
- In 2014 the total number of registered solicitors is 335,608
 - Life ins co : 198,653 (59.19%)
 - A&B: 136,955 (40.81%)



2. Qualification for Ins. Sales

- In 2014, among the solicitors
 - Male: 115,114 (34.30%)
 - Female: 220,494 (65.70%)
 - Age < 35 : 30%
 - Age < 45 : 60%
 - Education \geq high school (97.93%)
 - Education \geq college (44.99%)

2. Qualification for Ins. Sales

2014 Age distribution of salespersons for life insurance

| age | Male | | Female | | Total | | |
|-------|---------|--------|---------|--------|---------|--------|----------|
| | No. | % | No. | % | No. | % | Accum. % |
| 20-24 | 8,092 | 7.03 | 10,301 | 4.67 | 18,393 | 5.48 | 5.48 |
| 25-29 | 15,625 | 13.57 | 19,764 | 8.96 | 35,389 | 10.54 | 16.03 |
| 30-34 | 18,060 | 15.69 | 31,846 | 14.44 | 49,906 | 14.87 | 30.90 |
| 35-39 | 16,445 | 14.29 | 35,557 | 16.13 | 52,002 | 15.49 | 46.39 |
| 40-44 | 16,027 | 13.92 | 35,785 | 16.23 | 51,812 | 15.44 | 61.83 |
| 45-49 | 15,977 | 13.88 | 33,918 | 15.38 | 49,895 | 14.87 | 76.70 |
| 50-54 | 12,092 | 10.50 | 26,484 | 12.01 | 38,576 | 11.49 | 88.19 |
| 55-59 | 7,336 | 6.37 | 16,945 | 7.69 | 24,281 | 7.23 | 95.43 |
| 60-64 | 4,360 | 3.79 | 7,659 | 3.47 | 12,019 | 3.58 | 99.01 |
| 65+ | 1,100 | 0.96 | 2,235 | 1.01 | 3,335 | 0.99 | 100.00 |
| Total | 115,114 | 100.00 | 220,494 | 100.00 | 335,608 | 100.00 | — |

2. Qualification for Ins. Sales

2014 working time of salespersons for life insurance companies

| year | Full time | | | Part time | | | total |
|------|-----------|-------|--------|-----------|-------|--------|---------|
| | No. | % | growth | No. | % | growth | |
| 2010 | 88,445 | 53.01 | -4.92 | 78,401 | 46.99 | 3.55 | 166,846 |
| 2011 | 86,967 | 52.41 | -1.67 | 78,974 | 47.59 | 0.73 | 165,941 |
| 2012 | 88,835 | 51.66 | 2.15 | 83,115 | 48.34 | 5.24 | 171,950 |
| 2013 | 84,110 | 49.65 | -5.32 | 85,288 | 50.35 | 2.61 | 169,398 |
| 2014 | 87,833 | 48.69 | 4.43 | 92,572 | 51.31 | 8.54 | 180,405 |

2. Qualification for Ins. Sales

2014 Education distribution of salespersons for life insurance

| Education level | Male | | Female | | Total | | |
|-----------------|---------|--------|---------|--------|---------|--------|---------|
| | no | % | No. | % | No. | % | Accum.% |
| Graduate | 10,020 | 8.70 | 8,732 | 3.96 | 18,752 | 5.59 | 5.59 |
| College | 54,993 | 47.77 | 77,232 | 35.03 | 132,225 | 39.40 | 44.99 |
| Technical | 26,618 | 23.12 | 58,564 | 26.56 | 85,182 | 25.38 | 70.37 |
| High school | 22,366 | 19.43 | 70,136 | 31.81 | 92,502 | 27.56 | 97.93 |
| Junior High | 1,038 | 0.90 | 5,129 | 2.33 | 6,167 | 1.84 | 99.77 |
| Elementary | 62 | 0.05 | 509 | 0.23 | 571 | 0.17 | 99.94 |
| Other | 17 | 0.01 | 192 | 0.09 | 209 | 0.06 | 100.00 |
| Total | 115,114 | 100.00 | 220,494 | 100.00 | 335,608 | 100.00 | — |

2. Qualification for Ins. Sales

Education distribution of newly registered salespersons

| Education level | 2014 | | 2013 | | Growth in 2013 | |
|-----------------|--------|--------|--------|--------|----------------|--------|
| | No. | % | No. | % | No. | % |
| Graduate school | 3,036 | 8.83 | 2,877 | 9.37 | 159 | 5.53 |
| College | 18,178 | 52.88 | 16,078 | 52.34 | 2,100 | 13.06 |
| Technical | 3,697 | 10.75 | 3,607 | 11.74 | 90 | 2.50 |
| High school | 9,461 | 27.52 | 8,139 | 26.50 | 1,322 | 16.24 |
| Junior High | 5 | 0.01 | 18 | 0.06 | -13 | -72.22 |
| Elementary | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Other | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Total | 34,377 | 100.00 | 30,719 | 100.00 | 3,658 | 11.91 |

2. Qualification for Ins. Sales

2014 Education and age distribution of newly registered salespersons

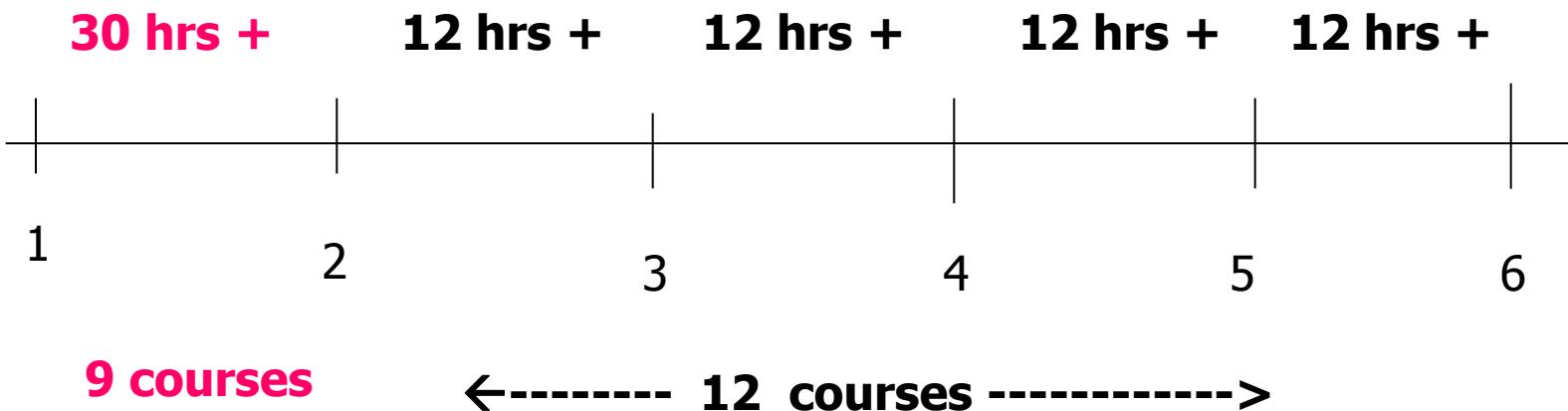
| Education level | persons | % | age | persons | % |
|-----------------|---------|--------|-------|---------|--------|
| Graduate school | 3,036 | 8.83% | 20-24 | 14,186 | 41.27% |
| College | 18,178 | 52.88% | 25-29 | 8,815 | 25.64% |
| Technical | 3,697 | 10.75% | 30-34 | 4,579 | 13.32% |
| High school | 9,461 | 27.52% | 35-39 | 2,644 | 7.69% |
| Junior High | 5 | 0.01% | 40-44 | 1,750 | 5.09% |

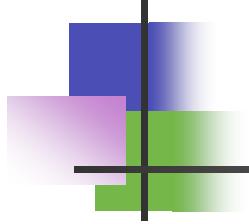
2. Qualification for Ins. Sales

Statistics of the Registration of Life Insurance Salesperson

| Year | Number of Newly Registered Salesperson | The 13th Month Retention Ratio % |
|------|--|----------------------------------|
| 2010 | 24,872 | 38.93 |
| 2011 | 22,645 | 42.07 |
| 2012 | 26,151 | 45.37 |
| 2013 | 24,017 | 44.01 |
| 2014 | 26,526 | 46.64 |

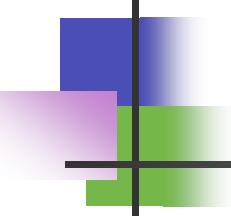
3. Training and Continuing Education





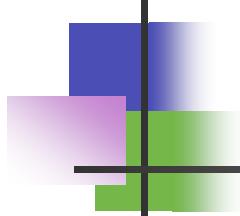
3. Training and Continuing Education

- 1st year after registered: 9 required courses
 - Knowledge of ins products
 - Basic marketing skill
 - Risk selection practice
 - Social insurance
 - Living plan and life insurance
 - Career planning for life insurance sales
 - Introduction to insurance regulation
 - Annuity contracts
 - Business ethics
- 2015/11/11



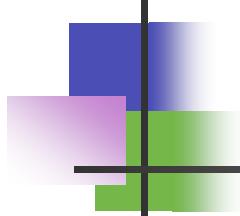
3. Training and Continuing Education

- 2nd year ~ 5th year: 12 required courses
 - Insurance law and regulations
 - Recruiting
 - Organization and training
 - Risk management
 - Computer and media
 - Job management and client relationship
 - Insurance and tax planning
 - Retirement planning and annuity contracts
 - Investment and financial planning
 - Variable life insurance
 - Advanced marketing skill
 - New Insurance products
- 2015/11/11



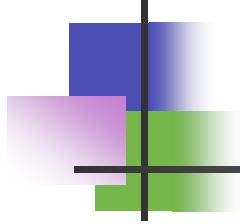
3. Training and Continuing Education

- Additional courses for solicitors of variable life insurance
 - Selling and service quality monitoring program
 - Business quality
 - Mutual fund
 - Fair trading & selling



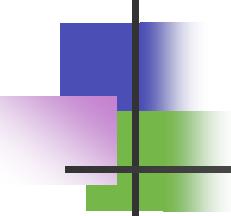
3. Training and Continuing Education

- Additional courses for solicitors of VL with structured products
 - Structured financial instruments
(courses, training hours, and tests designed by each individual insurance company)



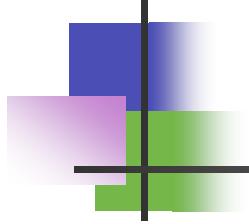
3. Training and Continuing Education

- Training time
 - 1st year: ≥ 30 hours
 - 2nd~5th year: ≥ 12 hours every year
 - 6th & + : depending on individual insurer



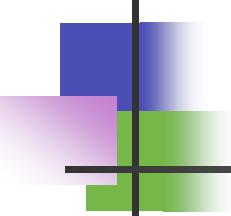
3. Training and Continuing Education

- Training program submission
 - By Dec./15 each life insurance company must submit its training programs of next year to life insurance trade association
 - By Dec./15 each agency/broker company must submit its training programs of next year to their trade association



3. Training and Continuing Education

- Report of training completed
 - Insurer, agency, and brokers must report the solicitors who complete the training program to their trade association



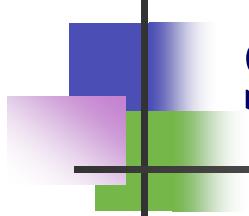
3. Training and Continuing Education

- Investigation of training programs
 - The committee of salespersons management of trade association may investigate the training programs to understand the performance of the training.
 - If the performance is unsatisfied, the committee may request improvement or report to the insurance commissioner.

3. Training and Continuing Education

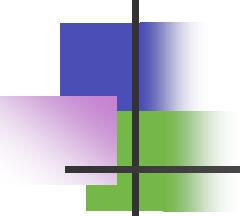
2014 Result of training for salespersons of life insurance

| Year of training | Insurance company | | | Agency & Broker | | | 2014 | 2013 |
|----------------------|-------------------|----------|----------|-----------------|----------|----------|------------------|------------------|
| | required | finished | finish % | required | finished | finish % | total finished % | total finished % |
| 1 st year | 198,653 | 184,968 | 93.11 | 136,955 | 129,167 | 94.31 | 93.60 | 93.70 |
| 2 nd year | 169,615 | 162,896 | 96.04 | 126,156 | 119,767 | 94.94 | 95.57 | 95.20 |
| 3 rd year | 153,324 | 148,185 | 96.65 | 117,857 | 112,040 | 95.06 | 95.96 | 95.65 |
| 4 th year | 140,250 | 136,225 | 97.13 | 109,821 | 104,088 | 94.78 | 96.10 | 96.34 |
| 5 th year | 130,804 | 127,873 | 97.76 | 101,626 | 97,752 | 96.19 | 97.07 | 97.05 |



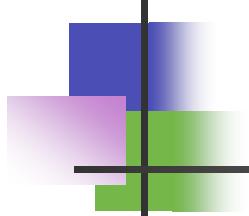
4. Performance of Salespersons of life insurance

- Contribution of salesperson
- Life insurance:
- Total prem in 2014/no. of sales
 $(\text{US\$79156m})/335608 = \$236,000$



4. Performance of Salespersons of life insurance

- No of salespersons violating the regulations and being punished
- 2014: 1821
 - Suspend solicitation for 3months ~one year: 1539
 - Revoke registration of solicitor: 282
- 2013: 919
 - Stop solicitation for 3months ~one year: 768
 - Revoke registration of solicitor: 151



4. Performance of Salespersons of life insurance

- 2014 revoked registrations of solicitors:
0.09%
- primary reasons for registration revoked
 - Fill out / sign the insurance policy without the consent of the insured (47/146)
 - Embezzle the insurance premium (44/146)

4. Performance of Salespersons of life insurance

Statistics of Insurance Complaint

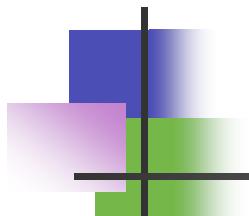
| Year | Non-Life | | | Life Insurance | | |
|------|------------------|----------------------------------|---------------------------|------------------|----------------------------------|---------------------------|
| | Complaint Rate % | Number of Policy Written (1,000) | Number of Complaint Filed | Complaint Rate % | Number of Policy Written (1,000) | Number of Complaint Filed |
| 2010 | 0.0143 | 40,909 | 585 | 0.0176 | 175,682 | 3,092 |
| 2011 | 0.0146 | 45,639 | 667 | 0.0146 | 187,622 | 2,736 |
| 2012 | 0.0175 | 50,772 | 890 | 0.0166 | 190,902 | 3,173 |
| 2013 | 0.0130 | 52,058 | 679 | 0.0123 | 202,983 | 2,496 |
| 2014 | 0.0159 | 52,235 | 828 | 0.0122 | 200,871 | 2,452 |

5. Case: Cathay Life



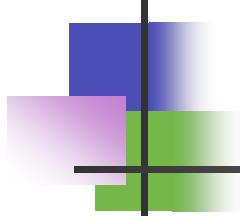
5. Case: Cathay Life





5. Case: Cathay Life

- About 26000 salespersons
- Training Expense: around US\$27 million
- Training time: > 65 hr classroom training
 - + filed office programs
- Retention ratio: 40% of the 1st year salespersons

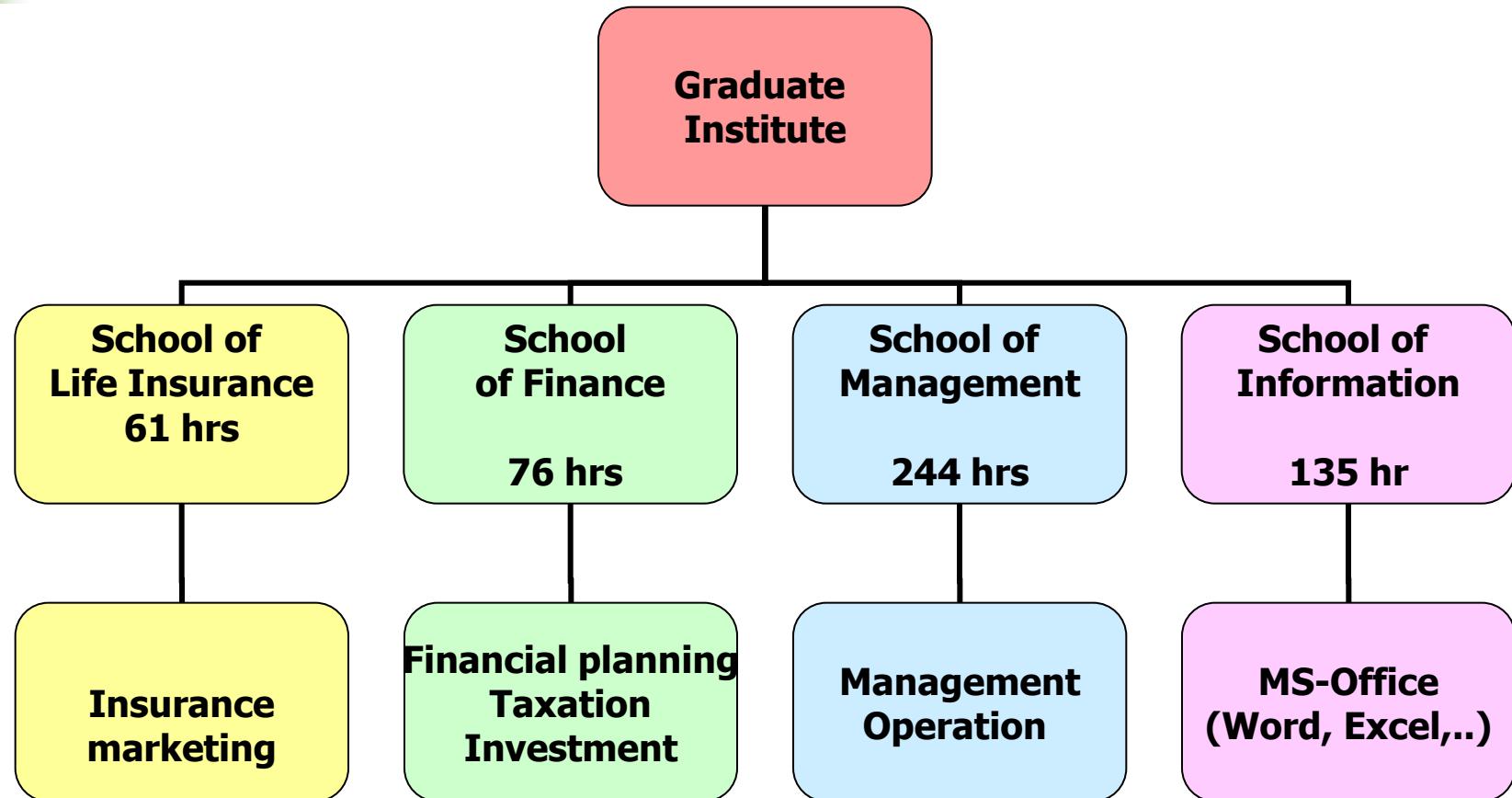


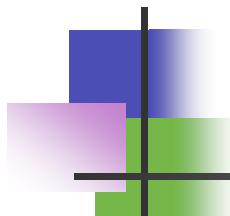
5. Case: Cathay Life

training and Continuing Education

- I. Training for Certificates
 - certificate for insurance solicitor
 - certificate for financial planner
 - etc.
- II. Advanced Training & Conti Education
 - Programs of 4 Schools

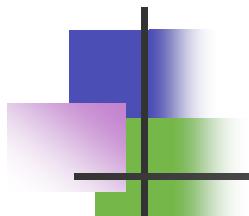
5. Case: Cathay Life





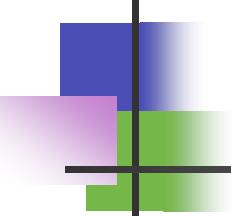
5. Case: Cathay Life

- Common training : Cathay News
 - 30 minutes broadcasting every morning (8:30am) at all the business units
 - Financial news related to insurance
- TV programs (up to 12:00pm) after Cathay News
 - Internal training programs
 - Courses related to certificates
- Internal online programs
 - 2015/11/11 Reviews of important training information



5. Case: Cathay Life

- The pass rate of salesperson registration exam is 96%
- Highest among the life insurance companies in Taiwan



6. Concluding Remark

Pearson Correlation Coefficients

| Marketing channel ¹ | Recommend score | Maintain 13 mo. | Maintain 25 mo. | Complaint ratio |
|------------------------------------|-------------------------------|------------------------------|-----------------------------|--------------------------------|
| Bancassurance | -0.20379** (0.0011) | -0.15901* (0.0125) | -0.06163 (0.3418) | 0.14310* (0.0217) |
| Salesperson of insurance companies | 0.39273*** (<.0001) | 0.09587 (0.2235) | 0.12757 (0.1046) | -0.28261*** (0.0003) |

1. % of premium incomes from marketing channel
2. significance level: ***:<0.001; **: <0.01; *:<0.05

Education for the Life Insurance Sales Professionals in the Super-Aged Japanese Society

Mariko Nakabayashi
Professor, School of Commerce
Meiji University, Japan

2015 Global Forum for Financial Consumers
Jeju University, Korea, 2015/11/01



- 1. Purpose of Presentation**
- 2. Progress of the Japanese Super-Aged Society**
- 3. Education for Life Insurance Professionals**
- 4. Ethical Issues in Life Insurance in the Super-aged Japanese Society**
- 5. Concluding Remarks**



1. Purpose of Presentation

- Japan is one of the world's fastest ageing societies with the highest longevity:
in terms of **number of elderly and life expectancy**



- The average age of policyholders has been rising
 - To secure protection through life insurance throughout their life is critical.
 - The needs of the elderly to cope with longevity risks have diversified.



- life insurance sales professionals are required to conduct various further procedures.
 - Increase in ethical issues in Life Insurance



2. PROGRESS OF THE JAPANESE SUPER-AGED SOCIETY



Profiles of Ageing in Japan, as of 2015

- total population(2014) :
127 million people (10th in the world).

- **32.96 million people are over 65 years old.**
(male:14.21 million , female:18.75 million)
→Percentage of the population over 65 : 25.9%

- Average life expectancy: male 80.50, female 86.83

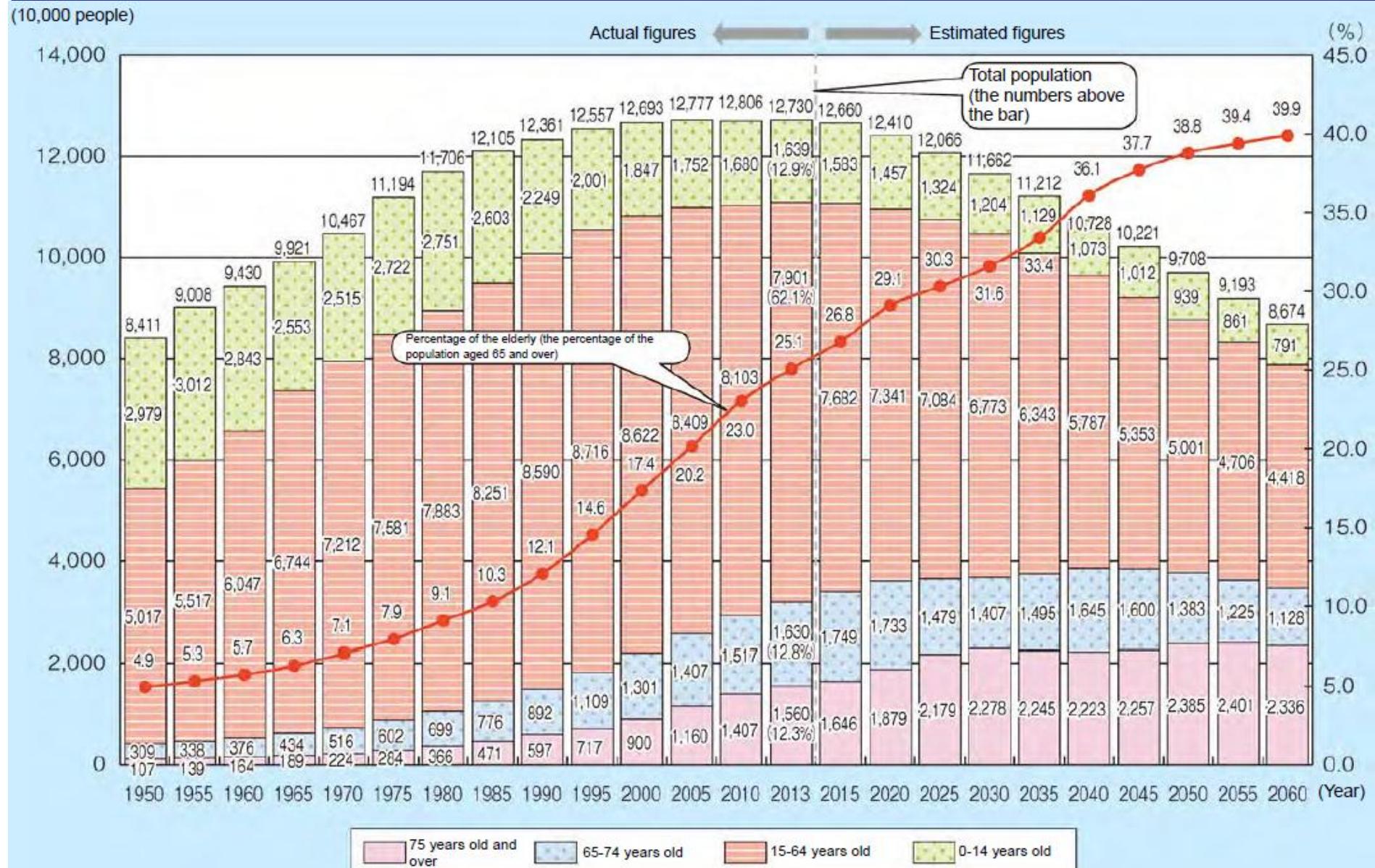
- Median Age : 46.0 years old(estimated)

- **1 in 8 is over 75 years old.**

- By 2060
 - **1 in 2.5 will be over 65 years old.**
 - **1 in 4 will be over 75 years old.**
 - **Average life expectancy:**
male 84.19, female 90.93

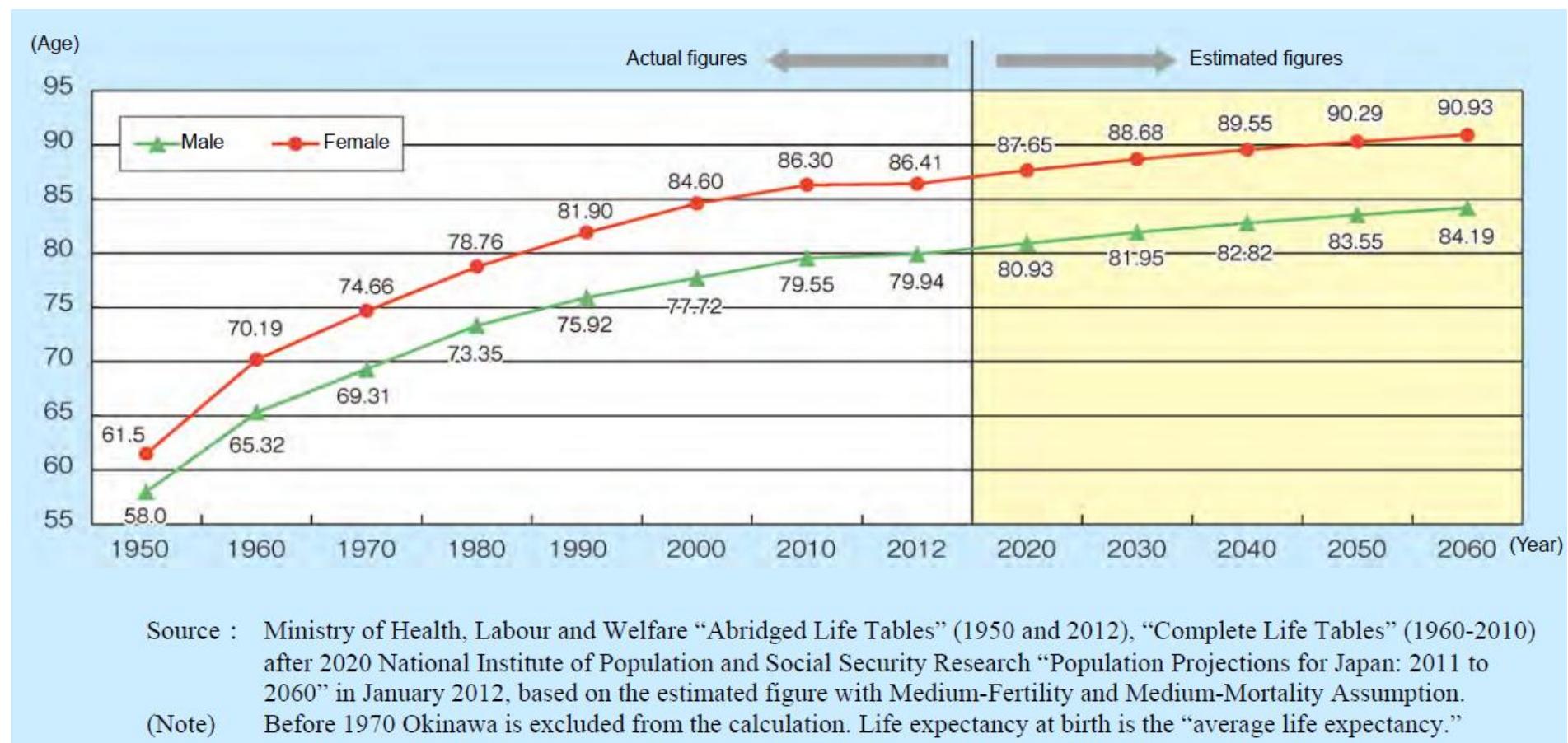


Trends in Ageing and Estimations for the Future

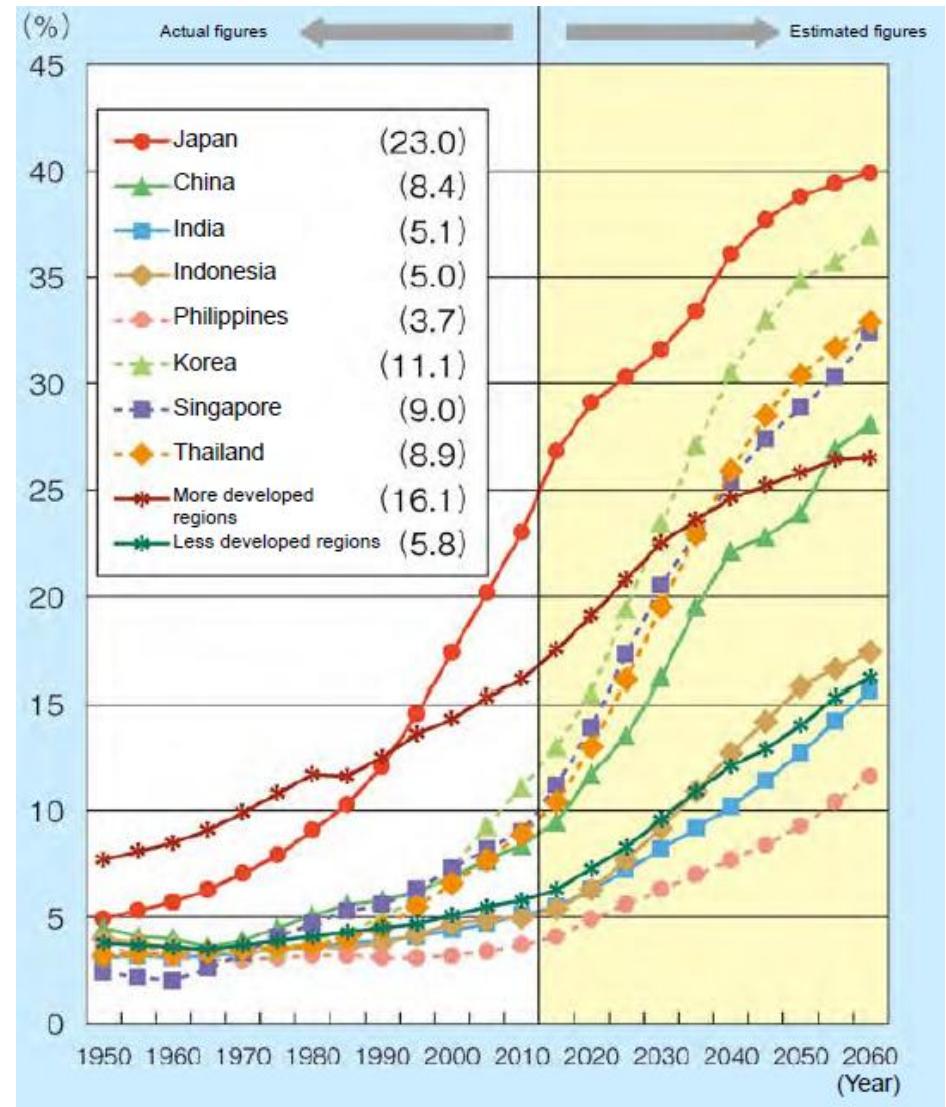
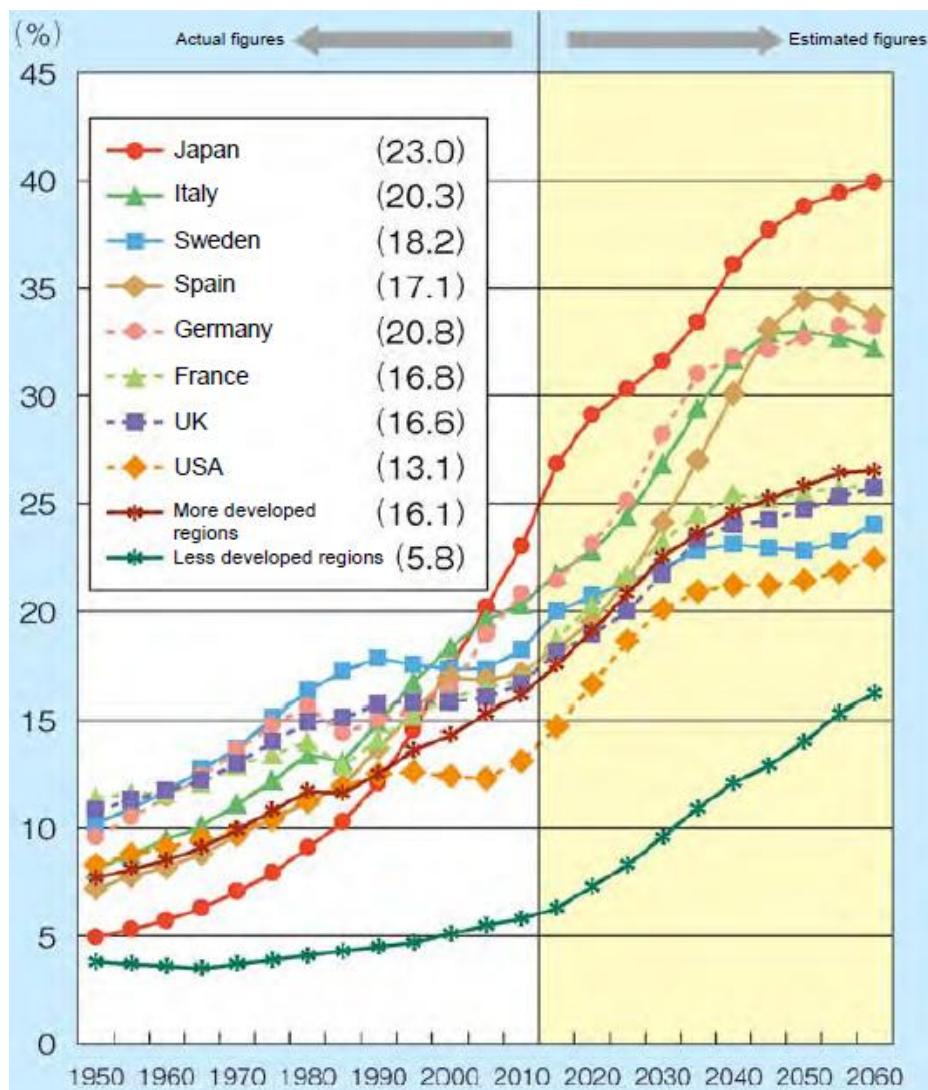


Source: Up to 2010 Ministry of Internal Affairs and Communications "Population Census," 2013 "Population Estimates" (as of October 1, 2013), after 2015 National Institute of Population and Social Security "Populations for Japan (January 2012) 2011 to 2060" based on the estimated figure with Medium Fertility and Medium Mortality Assumption
(Note) The total numbers for 1950-2010 include people of uncertain age.

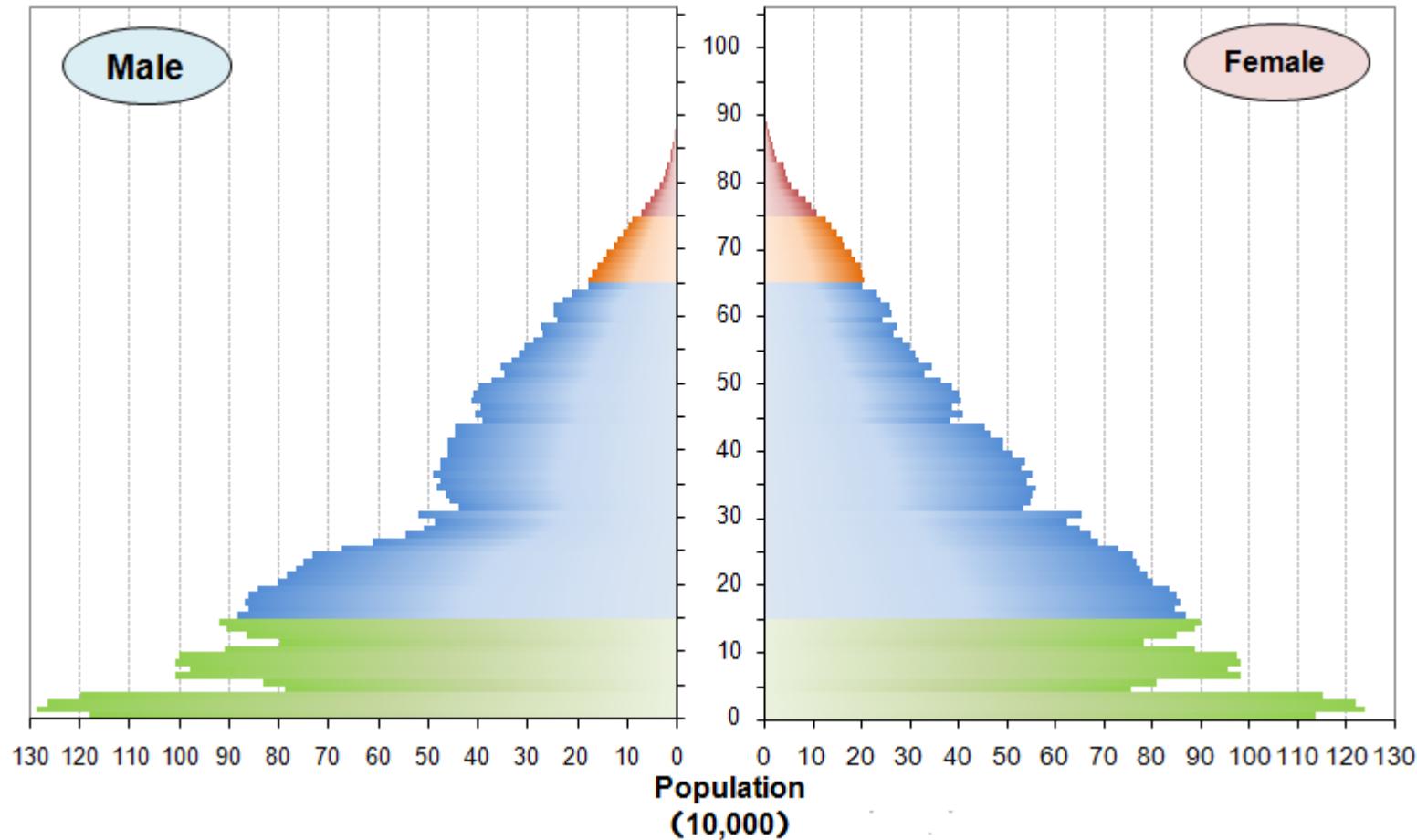
Average Life Expectancy Trends and Future Projections



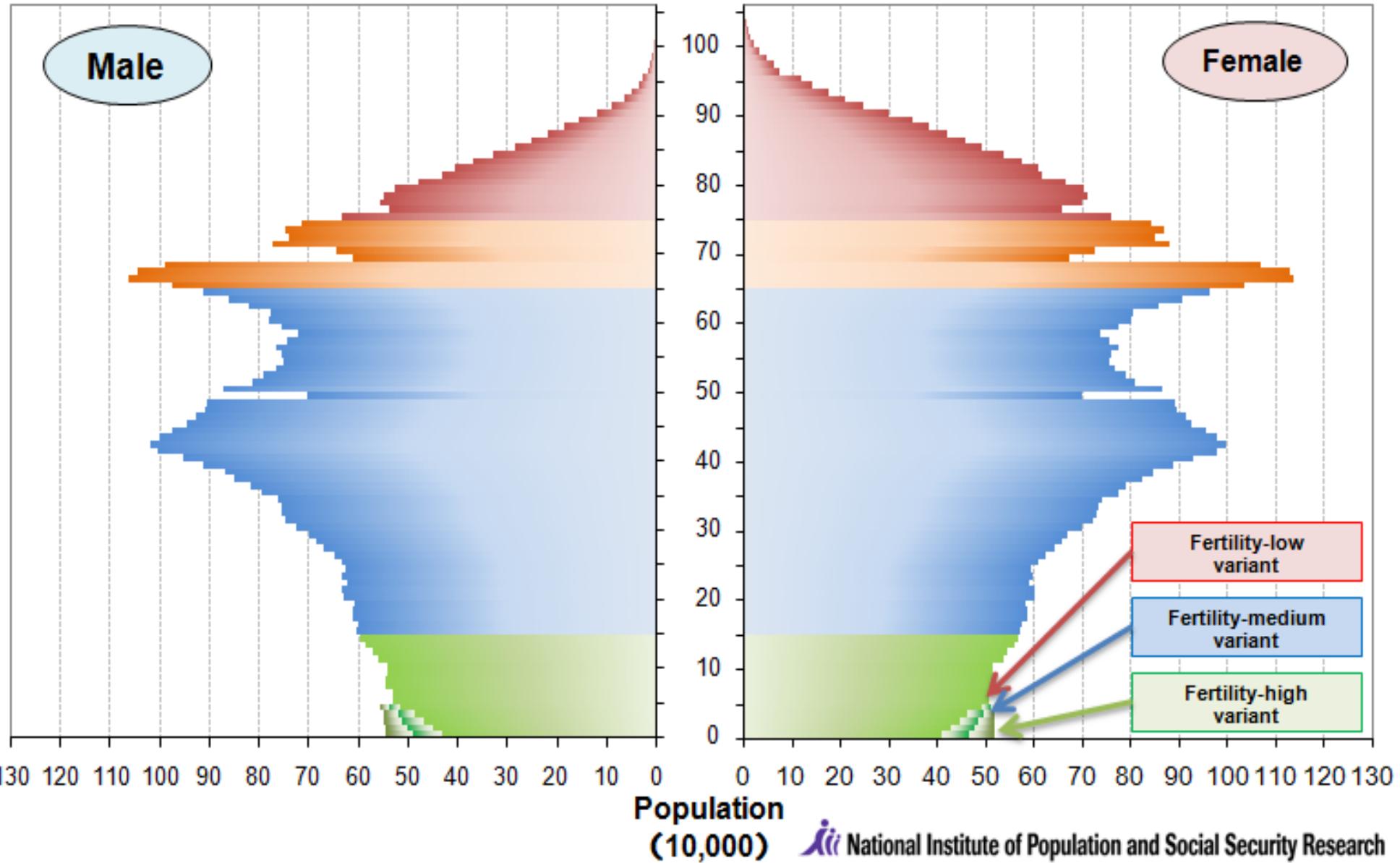
Worldwide over 65 Ratio Trends as of 2012



Demographic pyramid of Japan as of 1950

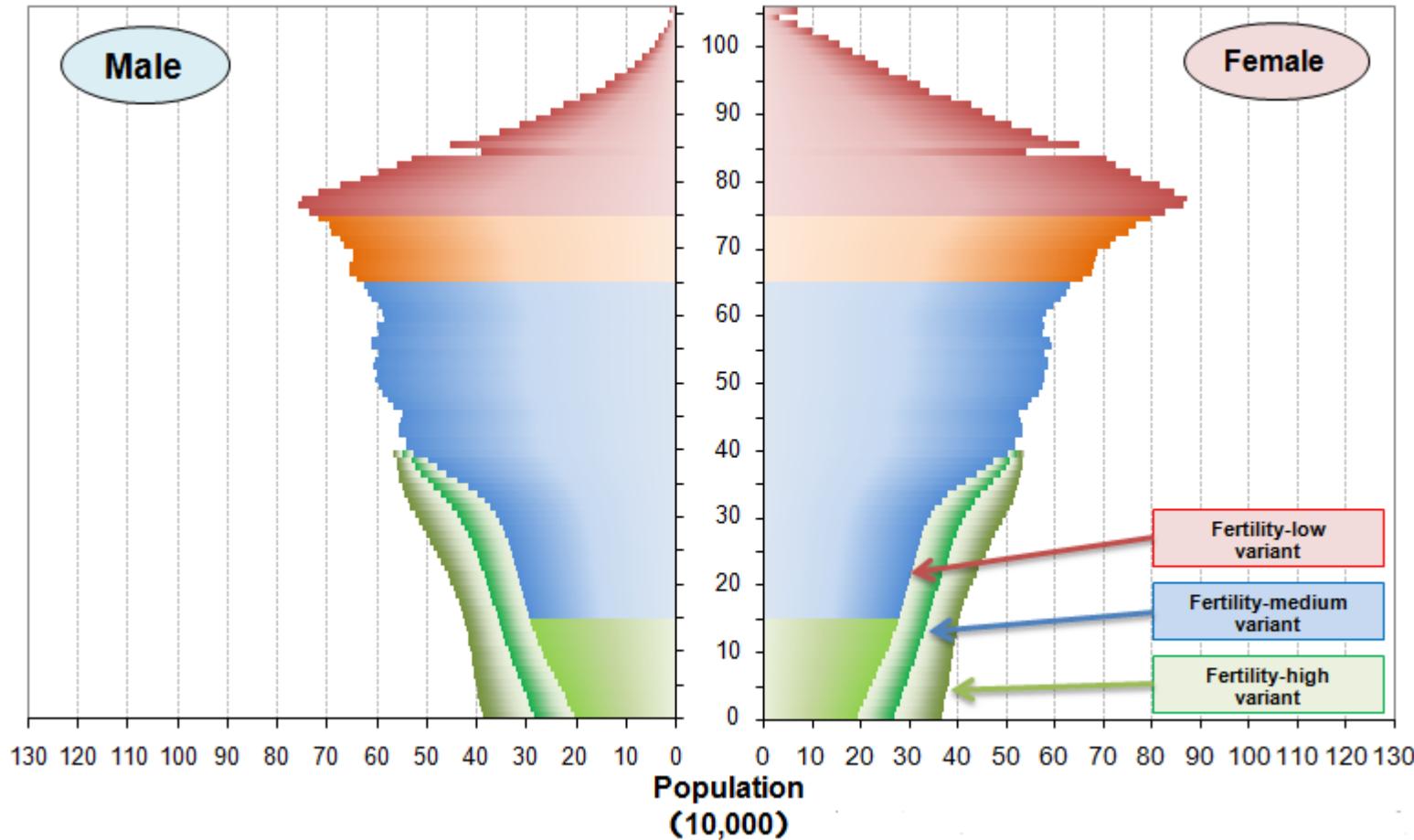


Demographic pyramid as of 2015



Sources: Census (1920-2010) and "Population Projections for Japan:2011-2060"(2015-2060)

Demographic pyramid of Japan as of 2050



Projection of the Number of Elderly Households

- Older persons increasingly are living independently.

| | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|--------|--------|--------|--------|--------|--------|
| Households whose head of household is aged 65 or over (thousands) | 16,200 | 18,887 | 20,060 | 20,154 | 20,111 | 20,215 |
| Of which, single-person households (thousands) | 4,980 | 6,008 | 6,679 | 7,007 | 7,298 | 7,622 |
| Households whose head of household is aged 75 or over (thousands) | 7,308 | 8,815 | 10,231 | 11,867 | 12,208 | 11,736 |
| Of which, single-person households (thousands) | 2,693 | 3,265 | 3,820 | 4,473 | 4,726 | 4,660 |
| Ratio | 36.8% | 37.0% | 37.3% | 37.7% | 38.7% | 39.7% |

Note: The projections are for the quarter century from 2010 to 2035 based on the population census conducted in 2010.

Source: Projection of households in Japan (January 2013), National Institute of Population and Social Security Research



Projection of Number of Elderly with Dementia

| | 2010 | 2012 | 2015 | 2020 | 2025 |
|---|------|------|-------|-------|-------|
| Elderly with dementia whose daily life independency level is level 2 or worse (million) | 280 | 305 | 345 | 410 | 470 |
| Ratio of those elderly to total aged 65 or over | 9.5% | - | 10.2% | 11.3% | 12.8% |

Note: Figures in 2010 are calculated based on the data concerning certification of long-term care need. Data since 2012 are future projections based on the projection of the number of households in Japan (January 2012), National Institute of Population and Social Security Research.

Source: Briefing paper on the number of elderly with dementia (August 2012), Ministry of Health, Labour and Welfare



4. OVERVIEW OF LIFE INSURANCE BUSINESS IN JAPAN



□ Second largest life insurance Market in the World

Even with demographic shift and declining sales affecting the industry, the Japanese life insurance market was the second largest in the world.

□ Market Share

Four major domestic insurers occupied 58.7% of policies in force of individual insurance as of FY2011.

□ Main Distribution Channel

Marketing systems for the sale of life insurance have changed dramatically over time. Although, the number of tied sales agents continued to decline, main distribution channel is tied sales agent. 59.4% in 2015, of life insurance policies were issued through tied sales agents.

(According to the 2015 surveys conducted by Life Insurance Institute of Japan)

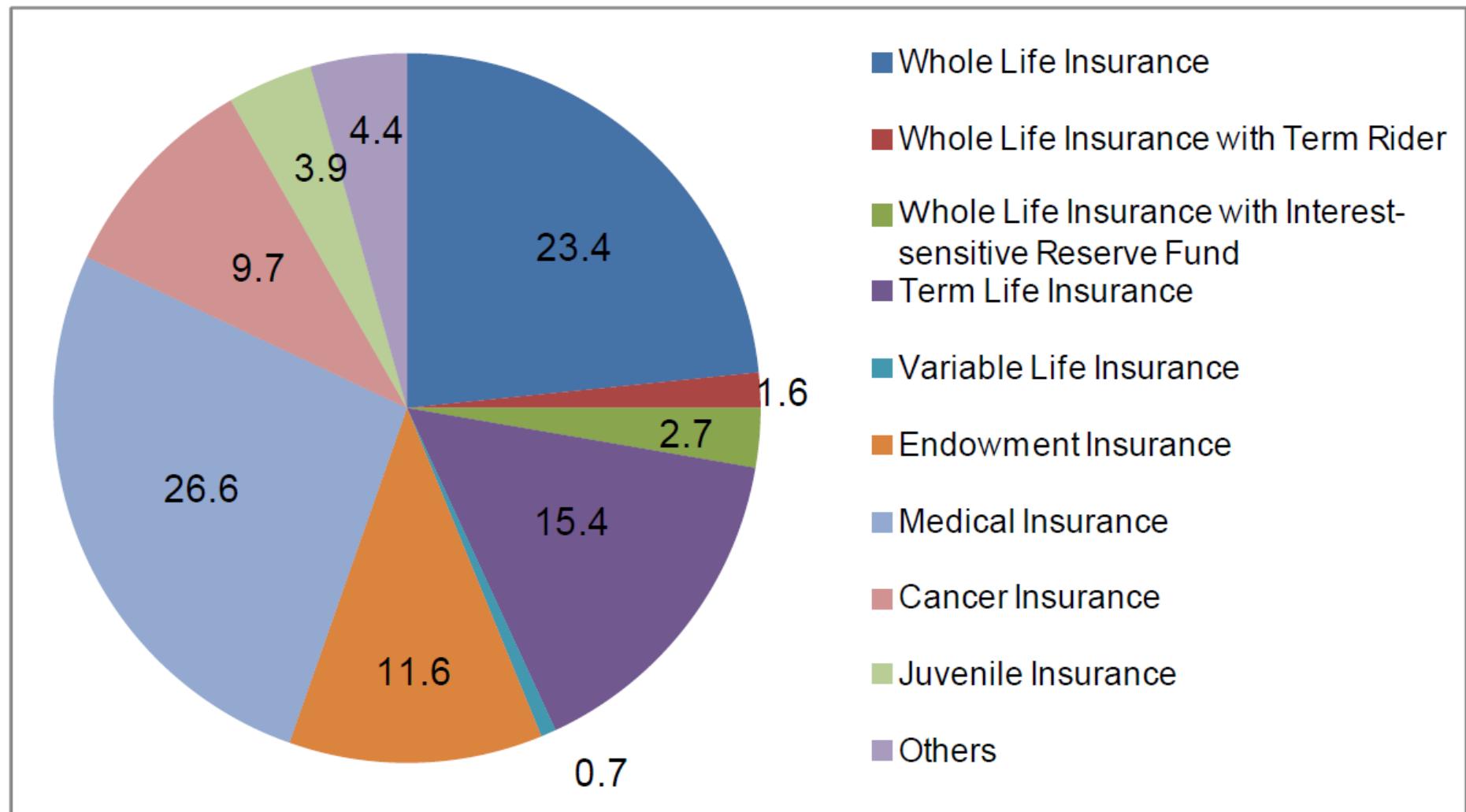
□ Increase in lifetime beneficial policies

Consumers' needs have rapidly diversified from traditional products to lifetime beneficial policies

(ex. nursing care, medical insurance,individual annuities)



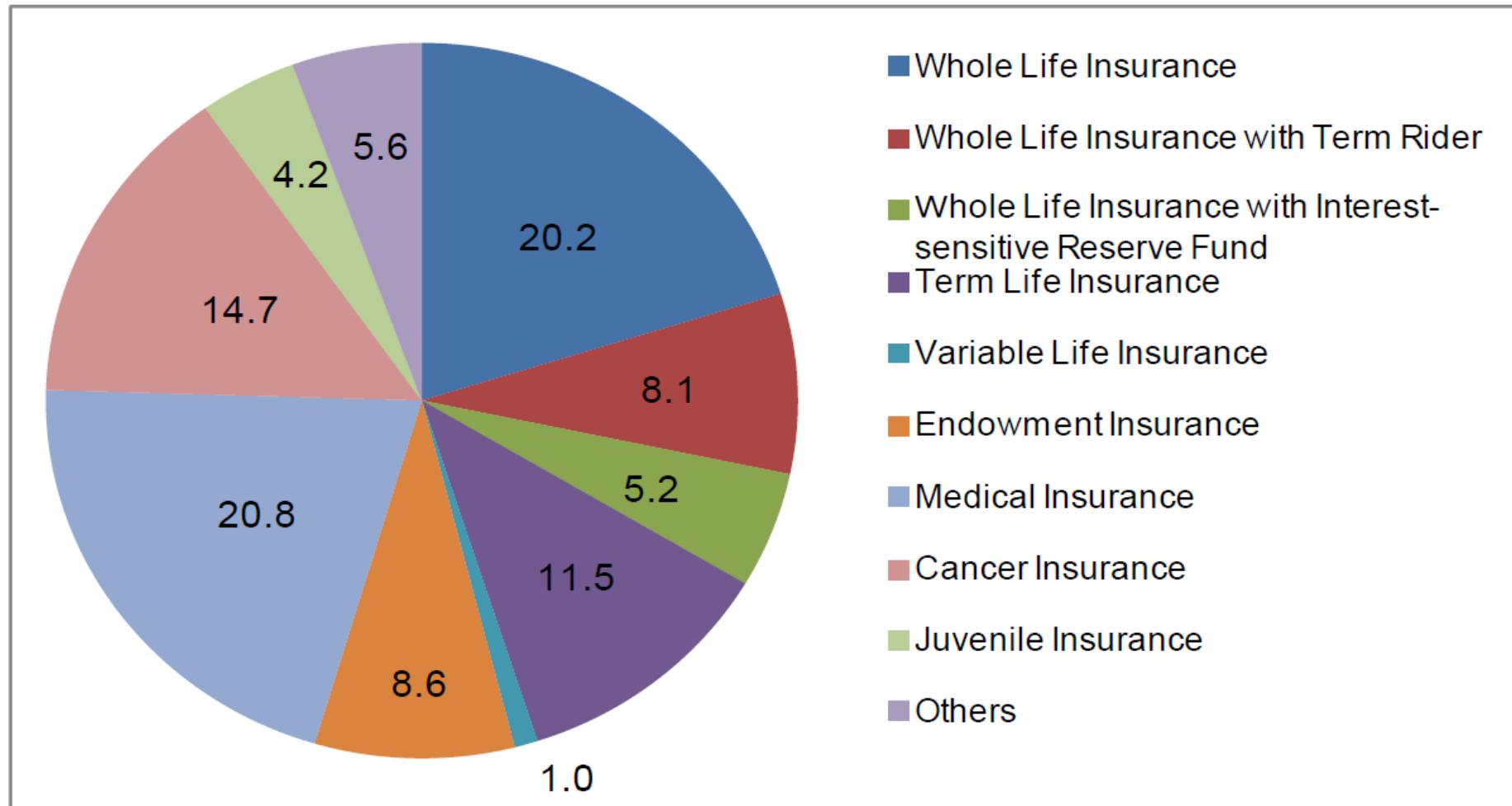
Percentage Distribution of Individual Insurance by Type (Number of New Policies) as of FY2013



Source <http://www.seiho.or.jp/english/publication/2013/pdf/2014.pdf>



Percentage Distribution of Individual Insurance by Type (Number of Policies in Force) as of FY2013



Source <http://www.seiho.or.jp/english/publication/2013/pdf/2014.pdf>



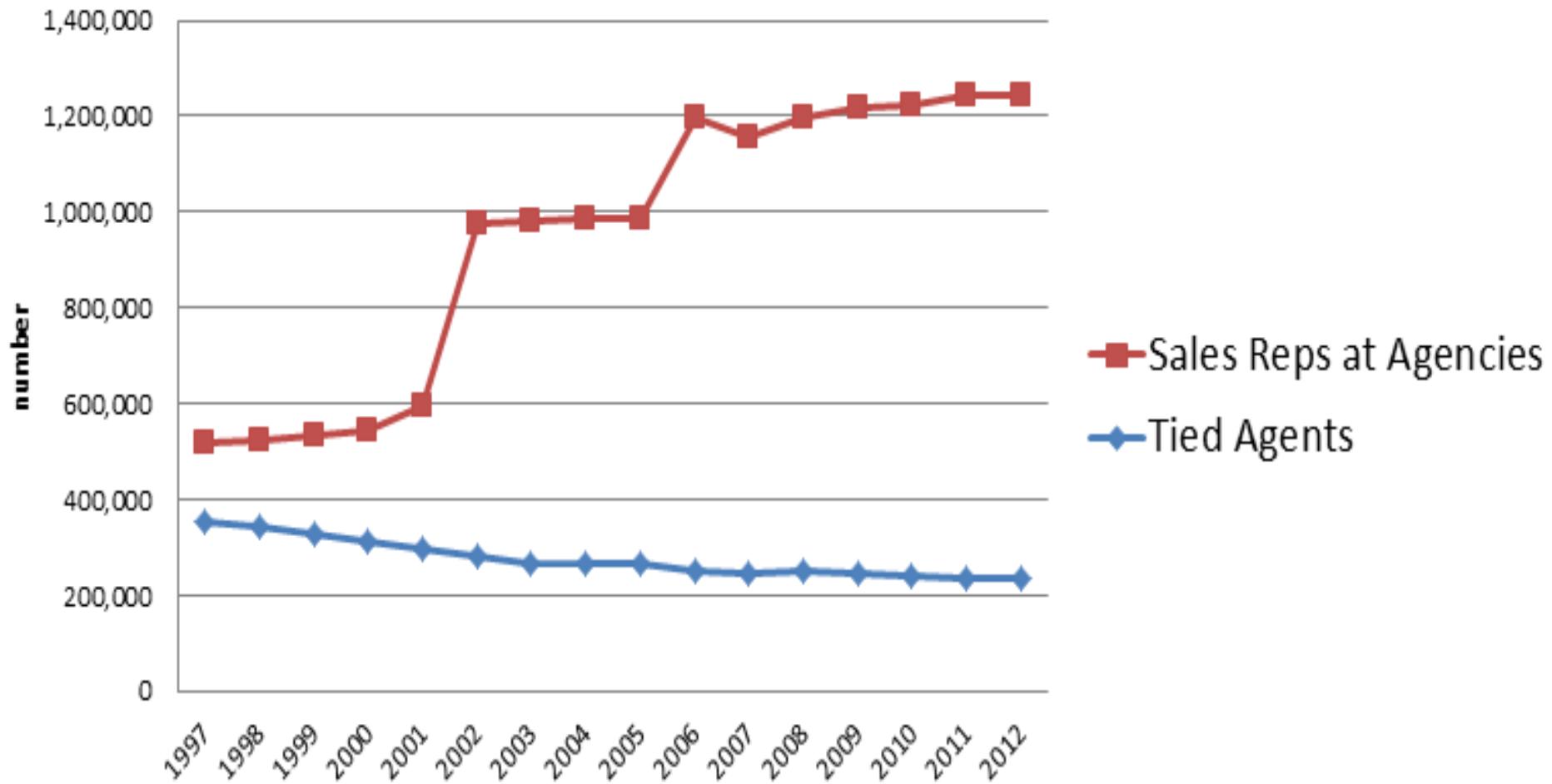
Number of Life Insurance Companies and Agents/Agencies

| Fiscal Year | Member Companies* | Number of Sales Force (in thousands) | | |
|-------------|-------------------|--------------------------------------|----------|------------------------|
| | | Tied Agents | Agencies | Sales Reps at Agencies |
| 2009 | 46 (40) | 250 | 106 | 970 |
| 2010 | 46 (41) | 240 | 102 | 989 |
| 2011 | 43 (38) | 236 | 99 | 1,005 |
| 2012 | 43 (38) | 233 | 96 | 1,011 |
| 2013 | 43 (38) | 228 | 91 | 1,015 |

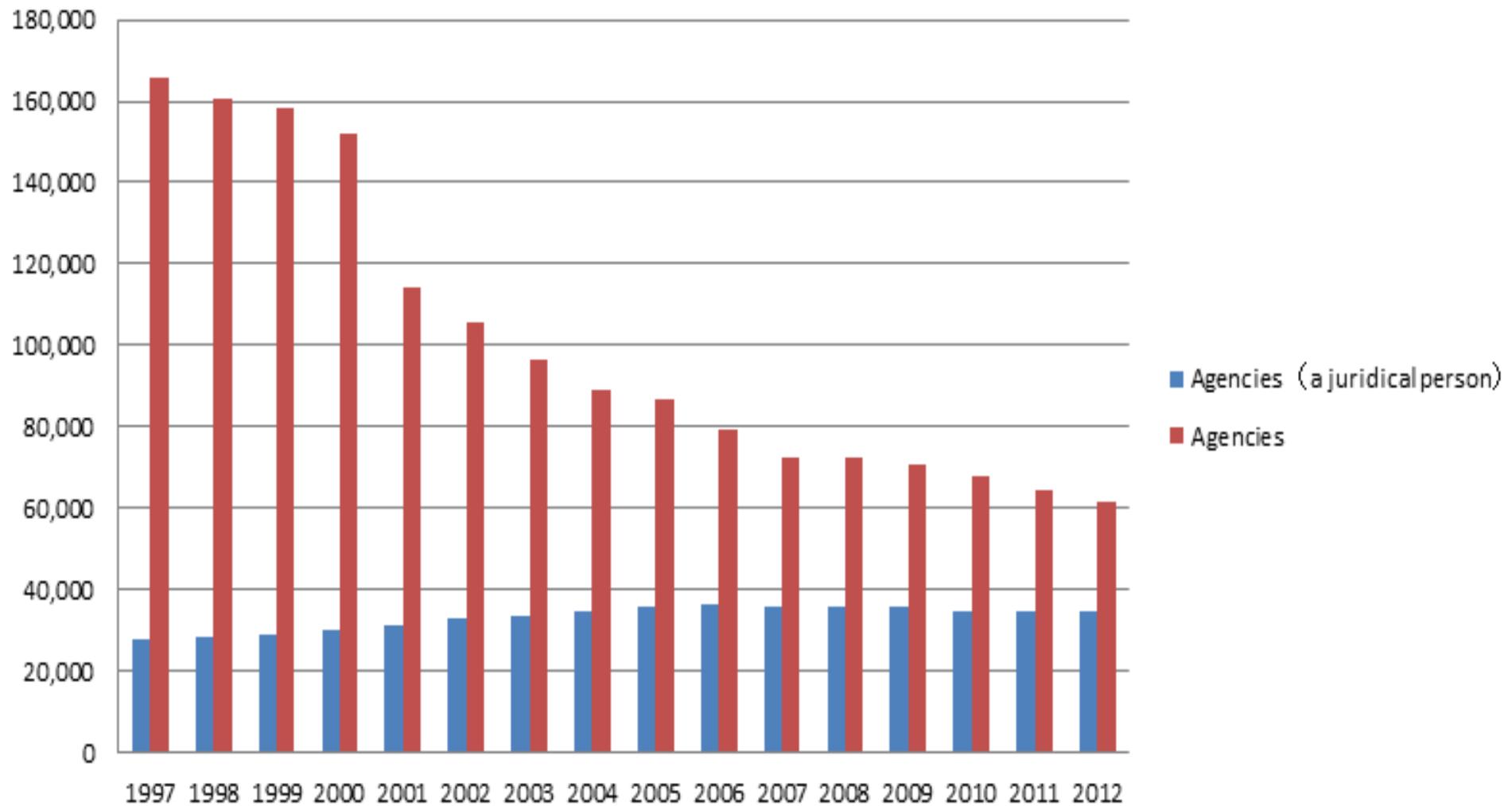
*Numbers in parentheses are those of stock companies. As of the end of the fiscal year.



Trends of Number of Tied Agents and Sales Reps at Agencies



Number of Agencies



□ Ratio of Existing Policyholders by Age Group (Example of a major insurer)

| | Age of existing policyholders (as of October 2012) | | | | | |
|---------------------------------|--|-------|-------|-------|------|---------------|
| | Under 50 | 50's | 60's | 70's | 80's | Older than 90 |
| Ratio of existing policyholders | 40.8% | 20.1% | 22.0% | 13.4% | 3.5% | 0.2% |

□ Projected Number of Individual Annuity Contracts Reaching Maturity

| | FY2012 | FY2013 | FY2014 |
|------------------------------------|--------|--------|--------|
| Projected number (thousands) | 489 | 772 | 1078 |
| Average of 33 insurers (thousands) | 15 | 23 | 33 |

Source: Survey conducted by the LIAJ in November 2012 (Answers submitted by 33 companies)



3. EDUCATION FOR LIFE INSURANCE PROFESSIONALS



Common-to-Industry Educational System for Life Insurance Sales Professionals

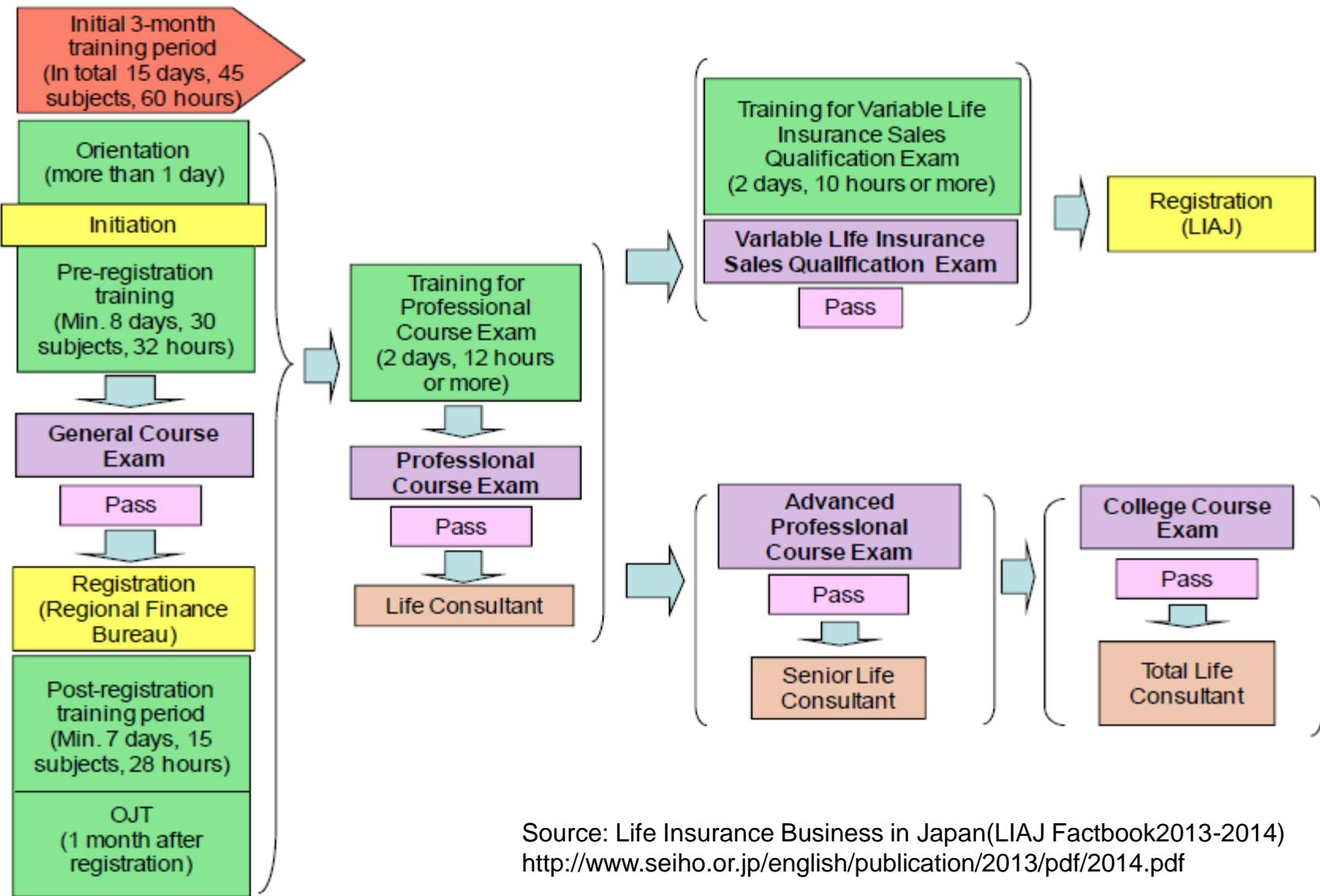
- Registered with the FSA

Tied sales agents and sales representatives at agencies need to be registered with the FSA to sell life insurance products as life insurance solicitors.

- The Life Insurance Association of Japan (LIAJ) administers exams to enhance the abilities of solicitors to provide better services to customers.
- "Variable Life Insurance Sales Qualification Course Exam"
- The LIAJ reviews and enhances the content of the textbooks for those examinations every year.



Chart of Common-to-industry Educational System



Source: Life Insurance Business in Japan(LIAJ Factbook2013-2014)
<http://www.seijo.or.jp/english/publication/2013/pdf/2014.pdf>



Purpose and Summary of Each Course

| Course | Purpose | Description |
|--|---|--|
| General Course | To gain a basic knowledge on life insurance required by a tied sales agent/sales rep at an agency. | <ul style="list-style-type: none">• Compliance at the time of soliciting insurance• Importance of maintenance and services after sales |
| Professional Course | To acquire more extensive expertise and related knowledge on insurance solicitation based on the core knowledge gained in the General Course. | <ul style="list-style-type: none">• Knowledge about other financial sectors• Social security and corporate benefit system |
| Advanced Professional Course | To acquire relevant practical knowledge essential for financial planning services. | <ul style="list-style-type: none">• Categories of tax and its calculation• Public pension program |
| College Course | To acquire further expertise on life insurance and related knowledge at a professional level. This course is the highest course in the common-to-industry educational system. | <ul style="list-style-type: none">• Financial planning• Study on corporate insurance products |
| Variable Life Insurance Sales Qualification Course | To acquire knowledge on the characteristics and mechanisms of variable products. | <ul style="list-style-type: none">• Types of variable life insurance and its mechanism• Prohibited matters and issues in soliciting variable products |



Continuing Education System

- The LIAJ has a system for continuous education of all life insurance sales professionals once a year in principle.
- The LIAJ also conducts follow-up activities every year to enhance the continuing education system.

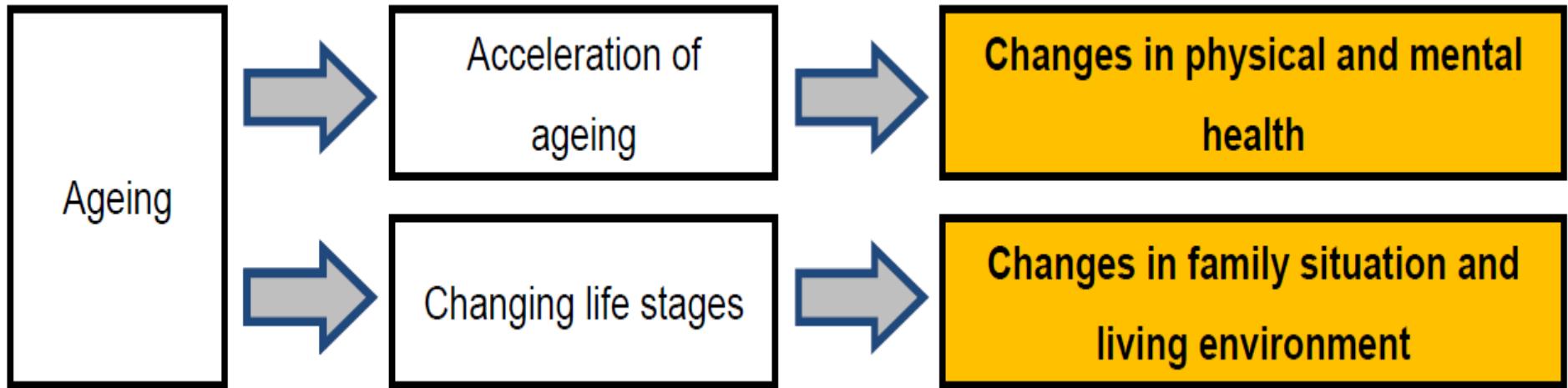


4. ETHICAL ISSUES IN LIFE INSURANCE IN THE SUPER- AGED JAPANESE SOCIETY



Characteristics of the Elderly policyholders

- Characteristics of the Elderly to be Considered When Providing Insurance Services for the Elderly.



- Main procedural channels
 - tied sales agents as face-to-face channels (customer-passive)
 - mailing/call center/internet as non-face-to-face channels (customer-active)



Increasing Importance of Improving Services for the Elderly

- Categories of Comments Received by the LIAJ in Interactive Dialogues on Life Insurance from Consumers.
 - General Service for Elderly regarding Policy Service
 - Designated Third-party Claim Scheme
 - Insurance Claim Procedure
 - Cancellation Procedure
 - Solicitation and its Structure
 - Bancassurance
 - Attitude



- To secure protection through life insurance, elderly policyholders need to be cautious about their policies throughout their life.



- **Issues in the policy/payment management stage**
- **Issues in the sale of new contracts stage**

- Ideal Way to Provide Insurance Services
 - Information-sharing on Good Practices Tailored to the Elderly (LIAJ[2013])



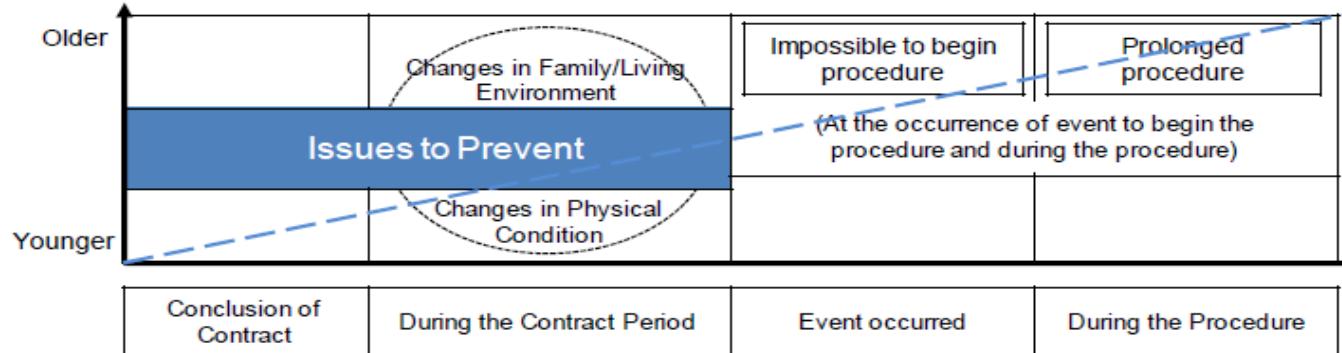
Challenges before beginning procedures and during procedures, and factors

| | Event occurred | During the procedure | |
|----------------------------------|--|--|--|
| Challenges | Procedure impossible to begin | Prolonged procedure | Increased number of procedures |
| Characteristics of Elderly | <p>It is impossible to verify the intention of the policyholder or beneficiary, or to make contact with either of them as their address is unknown.</p> | <p>Even if the claimant intends to make a claim, policy procedures may be hindered by the environment surrounding the elderly.</p> | <p>Number of payments and procedures will increase substantially in a super-aged society</p> |
| | <p>Factor 1: Declining mental/claim capacity of claimants</p> <ul style="list-style-type: none">Lower mental capacity of the policyholder or beneficiary (due to dementia, etc.)Difficulty of signing by the policyholder or beneficiary (due to ageing, etc.)Difficulty in going out to obtain official certificates, etc. (due to ageing, hospitalization, etc.) | | <p>Factor 3</p> <ul style="list-style-type: none">Increase in benefit paymentsIncreased number of policies reaching maturityIncrease in policy administration procedures |
| Change in Household or Lifestyle | <p>Factor 2: Impossibility to make contact/absence of agent/surrogate</p> <ul style="list-style-type: none">Impossible to contact the policyholder or beneficiary (due to address unknown)Impossible to find the beneficiary (or any legal heir) | <ul style="list-style-type: none">Absence of agent/proxy (elderly policyholder living alone, etc.) | |

Source:
LIAJ[2013]p.14



□ Issues during the contract period



- In general, only the policyholder is familiar with the policy provisions. Hence, it is necessary to inform family members with the consent of the policyholder of the policy provisions and how to make an insurance claim.
- Currently, life insurance companies collect the contact address of only policyholders, but they should improve address management, including registering multiple addresses.
- Although life insurance companies offer a designated third-party claim scheme which enables an agent to make a claim on behalf of the insured if the insured cannot do so, this does not apply to all policies and the scope of the scheme is limited.



- Continued efforts are needed to improve financial literacy (including life insurance) of the elderly.



Non payment of Proper Claims and the Industry's Efforts to Prevent Recurrence of These Problems

Since the third largest domestic life insurer's failure to pay legitimate claims came to light in early 2005, most life insurers disclosed their nonpayment of claims.

- Each company was to implement procedures to secure proper payout practices and full customer protection.
- LIAJ was addressing a variety of regulatory and education issues to better protect customers' interests.
- In April 2008, the Life Underwriting Training Institute (LUTI) instituted a new curriculum based on the LUTCF program of The American College.

Life Insurance Industry's Response to the Great East Japan Earthquake 2011

1. Providing livelihood support and relief for affected persons
2. Handling inquiries and claims procedures given the characteristics of the disaster
3. Confirming the safety of customers
4. Multiple publicity activities for customers
5. Establishing a network to ensure payment of insurance benefits

An Example of Companies <http://www.dai-ichi-life.co.jp/english/dsr/customer/example.html>



5. Concluding Remarks

- **Importance of Education for the Life Insurance Sales Professionals**
→Conclusions for Better Serving the Elderly
- **Legal responsibility/Ethical responsibility**
(The Pyramid of Corporate Social responsibility Carroll[2014])
→Is “not illegal but unethical conduct” is the most efficient way to make a profit?
- **In addition to education for Life Insurance Sales Professionals . . .**
→Education for all ages to encourage insurance literacy is critical.



Thank You for your attention!!

Mariko Nakabayashi
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Consumer Protection & Financial System Stability

Under Australia's Twin Peaks Model of Financial System Regulation.

Conclusion

- Australia uses the TP system, which is 1 of 4 systems currently in use world-wide
- It is by every measure the best system
- It is NOT however perfect, nor is it on its own an effective guarantee of either consumer protection or system stability
- So why bother studying it?
- because it does work better than the others, and has fewer failures and fewer theoretical weaknesses than the others.
- TP has failed as a system in the Netherlands, and it has suffered critical points of failure in Australia - especially as regards the financial advice scandals affecting consumers in Australia
- So the point of my talk is to tell you about TP, but to do so honestly and with integrity: to tell you about where it is strong, and where it is weak, and where it can be improved.
- Put simply: yes, indeed, please copy Australia, but please do not make the mistakes we have made.

“This [Twin Peaks] model has now been held up as the most effective model to address the flaws in unregulated or thinly regulated markets where the most problematic issues arose in the GFC”

- Coffee and Sale, 2009



“As a regulatory structure, it is the envy of many in other countries, and more recent regulatory architecture reforms in other countries are often based on what is described as the Australian ‘twin peaks’ approach ...”

- Erskine, 2014

What is Twin Peaks?

A David Lynch mini-series? No!

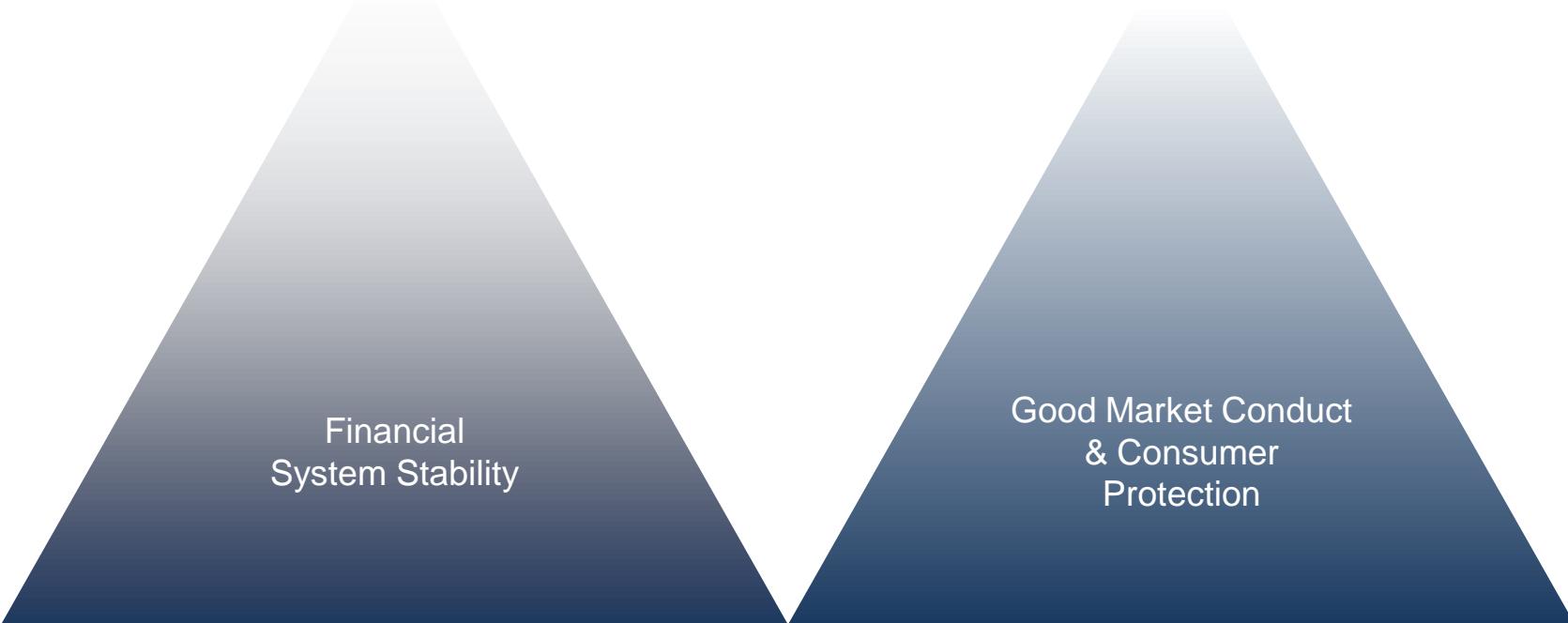




Developed by Dr
Michael Taylor when he
was at the Bank of
England

Despite being proposed by an Englishman, for the UK, it was first adopted by Australia in 1997

Envisages two peak regulators



The Australian Model

Australia has therefore used it the longest, and recently we subjected the model to a rigorous, 14 year review, called the Financial System Inquiry.

The forms it takes in Australia



 **APRA**



ASIC

Australian Securities & Investments Commission

What are the advantages?

- Regulators can be more effective, with each having clear objectives (outcomes) that do not overlap;
- Regulators can, as a result, be more accountable and more focused on achieving those outcomes;
- It creates checks and balances between agencies, and their objectives;
- It allows each regulator to create its own culture that best suits its objectives; and
- It allows each regulator to acquire expertise specifically required to meet its objectives.

Risk-based paradigm

...pick important problems and fix them.

Problems with this paradigm

- the assumption that regulators are smart enough to ‘foresee the unforeseeable’. Put differently, there is an assumption that regulators will know from where the next financial crisis will come and, consequently, correctly identify which types of risks and what forms of conduct to prioritise. But, as was seen during the GFC, this assumption is not always correct:
... indeed with respect to the global financial crisis more broadly, assumptions that had been made as to how markets would react in particular scenarios proved significantly misplaced, with risk events that had been anticipated to occur once in several lives of the universe were occurring every day.
- the model itself may incorrectly prioritise which risks to avoid, as distinct from a failure to identify the risk at all, and this was evident from the conclusions reached in the aftermath of the failure of HIH;
- there exists the potential for process-induced myopia. That is to say, a focus on the process upon which risk-based regulation relies, without paying sufficient attention to issues that are outside the scope of what is covered by the process.

If little scope is given in practice for those engaged in working within the framework to work outside it where they see the need, the framework will always be prey to events that those working within it were not given the room to say they had seen.

- Anecdotal evidence suggests that criticism of the APRA, and challenges to the organisation's prevailing orthodoxies are in danger of being met with hostility;
- there is, as a consequence, a lack of predictive certainty for the regulatees, as to what forms of conduct will be sanctioned and what forms not;
- this in turn encourages a capricious regulatory environment, particularly where different individuals in the regulators take different approaches, or have different priorities;
- an unpredictable regulatory environment, brought about by changes in the prevailing political climate;
- the potential for regulatees to encourage regulatory forbearance by either arguing that the proposed sanctions pose a greater risk to the regulated entity and therefore the entire financial system, than the misconduct itself; or
- the potential for regulatees to encourage forbearance by arguing that similar conduct was expressly authorised by the regulator in the past, (constituting, as it did then, an acceptable risk);
- what Llewellyn refers to as the 'Christmas tree effect', in which the regulator's remit steadily increases – as perceptions of risk increase - with a wide array of ancillary functions, both to the point of over-burden and to the point of distraction from what should be core activities;
- perceptions of risk are exactly that: perceptions. While APRA has attempted to create a methodology around the assessment of risk, and to lessen the impact upon the assessment of risk of individual perceptions, risk assessment is not and never will be as "rational" [or] as consistent in substance as its form suggests.'

Over-arching paradigm: Principles-based

“A principles-based approach does not work with individuals who have no principles.”

*- Hector Sants**

*Hector Sants, Chief Executive Officer, Financial Services Authority. Quoted in Larry Elliott & Jill Treanor, “Revealed: Bank of England disarray in the face of financial crisis”, ‘Economy’, The Guardian 7 January, 2015.



Two important things I want to mention:

- Yes! Australia did really well! – But we had a mining boom, vanilla banks not exposed to derivatives, and expansionary fiscal policy (huge infrastructure investment)
- No! Netherlands adopted Twin Peaks 2nd, in 2002, did disastrously badly during the GFC

Failures in Australia that pertain
to consumer protection...

The Financial Advice Scandals

- Why this is important?
- G.F.C.
 - Subprime disaster was a consumer protection failure: Low-doc, No-doc, LIAR loans
 - Subprime metastasized into a financial crisis which became a fire-storm that swept the globe.
 - So.... DON'T UNDERESTIMATE CONSUMER ABUSE AS A SYSTEM STABILITY THREAT

The Financial Advice Scandals

- An absolute disaster on the part of ASIC – (the market conduct and consumer protection body)
- Disgraceful failure
- Australian Senate has excoriated ASIC

The Financial Advice Scandals

- ASIC in bed with the banks
- BFF (best friends forever)
- Took 18 months before they did anything about a scandal affecting potentially millions of Australians, worth billions of dollars, and including outright document fraud, theft, and misleading and deceptive conduct

Why did ASIC act eventually?



What's the solution to weak enforcement?

- MAS – the Monetary Authority of Singapore
 - no one messes with the MAS

'The Singaporeans have transcended the limitations of compliance and the heretofore dominance of risk management systems designed in terms of minimizing the risk to the institution. Instead, it has very consciously aligned the 'end' - market integrity - with the 'purpose' of risk management - protecting the public interest. Firms are assessed on their demonstrable capacity to protect the public interest. This very clever exercise in regulatory engineering, combined with demand to report suspicion rather than evidence of wrongdoing and power of compulsion, creates a Panopticon effect. It may also lead to warranted confidence in banking industry exhortations that they are committed to professional integrity. It is a framework that is deserving of attention and emulation.'

"The inspections and reprimands from the Monetary Authority of Singapore are everything," a European banking veteran said. "Not respecting the rules risks huge fines, and even prison."

My idea....

Incentivize compliance

ASIC to keep a percentage of whatever fines it levies. In other words: the more you punish (bad behaviour) – the more money the regulator will have in its budget

Concluding remarks

- This matters! GFC!
- Twin Peaks is great, but its not perfect.
- Culture of the regulators, capacity to prevent regulatory capture and providing incentives are all very important.

A poodle? Or a hell-dog?



- Put simply, don't take your eye off your priorities: protect the financial system at a macro level, and at a micro level (consumers)

Thank you

The Futility of Chasing Financial Literacy without Complementary Policies for Market Conduct

Robert R Kerton

University of Waterloo, Canada

2015 Global Financial Consumer
Forum

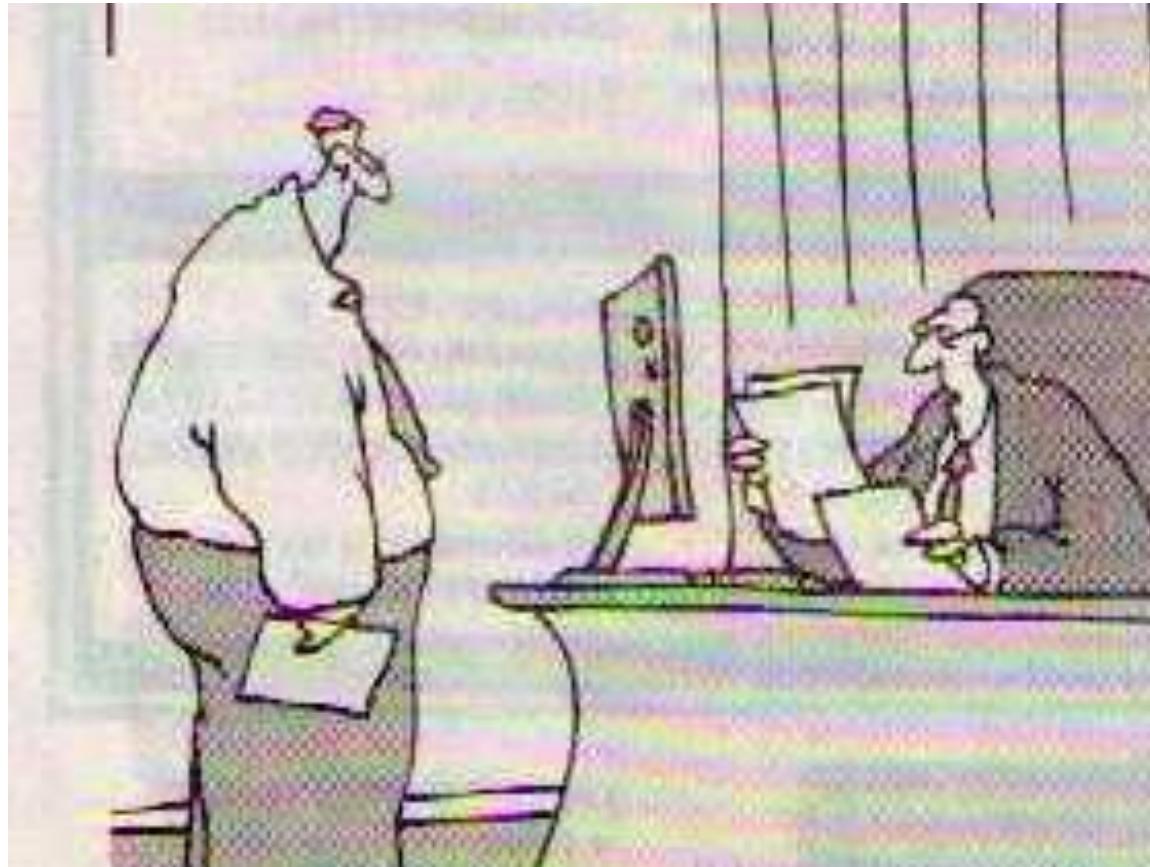
Nobel laureates in economics George A. Akerlof and [Robert J. Shiller](#) have a new book that explains how deception is a routine outcome of the market system. The authors argue that financial markets are especially vulnerable. ***Phishing for Phools: The Economics of Manipulation and Deception*** (September, 2015)

1995. Robert R. Kerton
and Richard W. Bodell,
"The Marketing of
Lemons: Quality, Choice
and the Economics of
Concealment" *The*
Journal of Consumer
Affairs, 29(1), pp.1-28.

WHAT IS THE CORE PROBLEM FOR A CONSUMER DECISION?

The difficulty of a decision (D) depends on the size of the technical challenge (T) versus (L), the combination of experience and literacy skills that can be used to help make the decision.

$$D \frac{T}{L}$$



“This is gobbledegook. I asked for mumbo jumbo”

**INNOVATION IN THE FINANCIAL SERVICES
SECTOR: FRIEND AND FOE**

TO SOLVE “INFORMATION OVERLOAD”

**MORE PROBLEMS: THE ECONOMICS OF
“NOISE”**

**TO SIMPLIFY “T” WE NEED MARKET CONDUCT
POLICIES**

**CANADA’S EXPERIENCE WITH AN INSTITUTION
TO FRAME THE FINANCIAL INCENTIVE
SYSTEM**

CONSUMER EMPOWERMENT

Thank you

Comments on: Twin Peaks: A Theoretical Analysis

2015. 11. 1.

Sung-In Jun
(Hongik University)

Contributions of the Paper

- Overall Introduction of the Twin Peaks system
- Historical Background
 - Especially the English experience
- Real-life Experience
 - The Australian experience
- Strong and Weak points of Twin Peaks system
 - Means according to end
 - Equal regulators
 - Loophole: HIH insurance collapse

A Few Questions on Existing Practice

- How to divide the regulatory functions between Prudential Regulator and Conduct Regulator?
 - Some regulatory functions are obvious to divide
 - Some are not => **double regulation** from both or pick someone as the **principal regulator** for that function?
 - What if the regulators do not agree?
- How to divide the regulated financial institutions?
 - Do not divide at all, or
 - Type I (under Prudential Regulator) vs. Type II (under Conduct Regulator)?

A Few Questions (continued)

- Who are the financial consumers?
 - Natural person: always?
 - Small enterprise or proprietors
 - Small stake: even brought by the large firm?
- Nonreciprocal Binding Power(NBP) of ADR
 - How to overcome constitutional controversy?
 - Do financial consumers stop legal fight after the arbitration of ADR?
 - Did you see any behavioral change on the part of financial firms after the introduction of NBP?

A Few Questions (continued)

- How far does the system protect financial consumer?
 - Only malpractice and negligence violating existing rules?
 - Go much further to **insure consumers from investment loss** due to misguidance on the part of financial firms?
- How to cope with systemic risks?
 - Who bears the burden of principal responsibility for identifying and coping with the systemic risk?
 - Who is the principal regulator for **large and complex business group**? (financial and/or nonfinancial?)
 - What are the emergency powers held by the above body to mitigate the potential threat to the financial system? (such as the section **121 divesture power of FSOC** in Dodd-Frank)