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**“Systematization of housing privatization  
in Germany, of portfolios with more than 50,000 units -  
Development of a Privatization-Analysis-Model (PAM)”**

Presented by: Dipl.-Betriebswirt (FH) **Rainer Reddehase** FRICS MBA

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## Table of Contents

<i>Table of Content</i> .....	<i>I</i>
<i>Table of Figures</i> .....	<i>II</i>
<i>1. Introduction</i> .....	<i>1</i>
<i>2. Presenting the Topic</i> .....	<i>2</i>
2.1 Research Interest .....	2
2.1.1 Research Objective.....	2
2.1.2 Research interest concerning residential real estate transactions .....	3
2.2 Research Problem.....	4
2.3 Aims of the proposed research.....	5
<i>3. Overview of current research</i> .....	<i>9</i>
3.1 Overview of the housing portfolio market .....	9
<i>4. Specifying the topic of the dissertation</i> .....	<i>22</i>
<i>5. Theses</i> .....	<i>24</i>
<i>6. Methodology</i> .....	<i>26</i>
<i>7. Proposed thesis outline</i> .....	<i>28</i>
<i>8. Summary and Outlook</i> .....	<i>33</i>
<i>Glossary</i> .....	<i>34</i>
<i>References</i> .....	<i>38</i>
<i>Publication Rainer Reddehase</i> .....	<i>42</i>
References .....	38
Publication Rainer Reddehase.....	42

**Table of Figures**

Figure 1: Empirica vacancy index - by federal state .....	12
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## 1. Introduction

The year 2000 marks the onset of sales of large housing corporations and housing portfolios in Germany at an unprecedented scale. The public authorities (federal state, states, communes) have been selling and privatizing their housing stock. But industrial companies have also been selling off substantial housing stock. On the buyer's side, international financial investors have been the most active. This thesis project shall analyze the largest transactions of housing portfolios (portfolios of more than 50,000 units) that have taken place in Germany. Special attention is to be paid to the valuation methods used in the course of the acquisition of housing portfolios. Specifically, portfolio valuation has to discern between houses that can be sold in their entirety (as so-called en-bloc sales) and units that are suitable for tenant privatization (i.e. suitable for conversion into condominiums). International investors' strategies are to be analyzed regarding the different exit strategies they pursue, including IPOs, resale of portfolios and rental privatization.

A particular focus is to be placed upon the bidding procedures for the so-called *Eisenbahnerwohnungen*, a portfolio of railway worker housing (sold in 2000 / 114,000 units), the sale of GAGFAH, Essen (2004 / 82,000 units), of GSW, Berlin (2004 / 67,000 units), of Viterra, Bochum (2005 / 140,000 units), of WOBA Dresden (2006 / 50,000 units) and of LEG NRW (2008 / 93,000 units).

As further large transactions are forthcoming, the topic of this thesis project stands to become ever more important. Amongst other transactions, the acquirer of the GSW, Berlin, has conducted an IPO in April 2011.<sup>1</sup> LBBW Immobilien Stuttgart with more than 20,000 units sold in 2012.

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<sup>1</sup> Cf. Rebhan, Christine, GSW-Aktie geht zum Mindestpreis über den Tisch, Immobilien-Zeitung 2011-04-14, <http://www.immobilienszeitung.de/1000003260/gsw-aktie-geht-zum-mindestpreis-ueber-tisch> (Accessed 2011-04-14)

## 2. Presenting the Topic

This chapter presents the overarching topic of the dissertation project and formulates the research issue. Furthermore, the author presents gaps in current scholarly literature. This provides the framework for presenting the aims and relevance of this thesis project.

### 2.1 Research Interest

In the following, the challenges typical of large-scale residential portfolio transactions are presented and discussed.

#### 2.1.1 Research Objective

Through a systematic analysis of the largest residential real estate transactions that have taken place in Germany during the past decade (of size greater than 50,000 units), the relevant criteria are to be derived for evaluating the stock in the course of due-diligence analyses.

The challenge to be overcome lies in the fact that the housing stock (the assets<sup>2</sup> for sale) is oftentimes very heterogeneous (varying widely in year of construction, type of building, apartment size, number of rooms per apartment, etc.) and that the stock is often located in different cities and regions.<sup>3</sup> At the same time, in the case of such large-scale transactions, an analysis of each individual building would not be feasible for cost reasons. Additionally, the slim timeframe<sup>4</sup> allotted to the valuation of the units and the assessment of the potentials for privatization (privatization of the second order, i.e. tenant privatization)<sup>5</sup> in structured bidding processes<sup>6</sup> requires that decisions are based on approximations of the values of apartments.

By generalizing the criteria relevant to the analysis of privatization potentials, valuation methods can be developed to guide future transactions involving large portfolios (First-order

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<sup>2</sup> Assets: Investments, fixed assets, Ownership

<sup>3</sup> Cf. Heuer, Jürgen: Die Wohnungsmärkte im gesamtwirtschaftlichen Gefüge in Kompendium der Wohnungswirtschaft, Jenkis, Helmut (Ed.), München 1991, P. 22f.

<sup>4</sup> Cf. Gondring, Hanspeter/Wagner, Thomas: Real Estate Asset Management, München 2010, P. 341

<sup>5</sup> Cf. Buchner, Florian: Begründung und Verwaltung von Wohnungs- und Teileigentum in: Spezielle Betriebswirtschaftslehre der Immobilienwirtschaft, Murfeld, Egon (Ed.) 6. Run, Hamburg 2010, P. 971 ff.

<sup>6</sup> Due Diligence: „requisite care“, a method originally developed for corporate transactions (Corporate M & A)

privatization, privatization of formerly public-utility companies / Privatization of public property). At present, the public authorities still own more than 3 million housing units in Germany.<sup>7</sup>

### **2.1.2 Research interest concerning residential real estate transactions**

The sale of large housing portfolios by the public authorities is often motivated by economic reasons.<sup>8</sup> But also large corporations, primarily industrial and of the energy sector, have in recent years begun to part with their non-core assets.<sup>9</sup> Under the law against restraints on competition [*Gesetz gegen Wettbewerbsbeschränkungen*] and in keeping with international agreements, but also to maximize attainable sales-price, transactions are usually organized as international bidding processes. National and international investors are given an opportunity to place bids for the housing associations.<sup>10</sup>

Because of the complexity of large portfolio transactions, bidding process are usually conducted in a highly structured manner.<sup>11</sup> The seller puts together a sales team (vendor due diligence). As part of this due diligence process, the opportunities and threats of the transaction in question are examined from the point of view of the seller. Commercial, tax, legal, environmental and technical experts are asked to provide their assessments. As the assets under consideration are residential real estate, in addition to the assessments by lawyers, accountants, tax advisers and bankers, the due diligence must also take into account the perspectives of real estate experts and architects in what is referred to as the technical due diligence. At the latest

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<sup>7</sup> Cf. Gondring, Hanspeter/Wagner, Thomas: Real Estate Asset Management, München 2010, P. 350

<sup>8</sup> Cf. BBR-Report Kompakt 3/2008: Neue Trends beim Handel von Wohnungsportfolios in Deutschland, Bonn 2008, P. 3

<sup>9</sup> O.V.: Finanzinvestor kauft 150.000 Wohnungen, Der Tagesspiegel (18.05.2005) taken from: <http://www.tagesspiegel.de/wirtschaft/finanzinvestor-kauft-150000-wohnungen/609052.html> (Accessed: 2011-04-17)

<sup>10</sup> Deutscher Städte- und Gemeindebund: Neues GWB-Vergaberecht in Kraft getreten, 23.4.2009 taken from: [http://www.dstgb-vis.de/home/aktuelles\\_news/aktuell/neues\\_gwb\\_vergaberecht\\_in\\_kraft\\_getreten/index.html](http://www.dstgb-vis.de/home/aktuelles_news/aktuell/neues_gwb_vergaberecht_in_kraft_getreten/index.html) (Accessed: 2011-04-17)

<sup>11</sup> Cf. May, Andreas/Makowski, Gästa: Rechtliche Aspekte von Immobilieninvestitionen in Praxishandbuch Immobilien-Investitionen, Schäfer, Jürgen/Conzen, Georg (Ed.), 2. Run, München 2011, P. 374

in the advanced stage of the bidding process, the buyer's side, also puts together a Due Diligence team to conduct a buyer's side due diligence.<sup>12</sup>

To place a bid, the respective bidders (in practice often private equity funds) develop financing models together with their advisers. These models cover the terms of the structured financing, e.g. durations and leverage ratios and are subsequently presented to the banks as a decision aid in the acquisition process.<sup>13,14</sup>

The assets held make up by far the largest part of the value of housing associations. These are the apartments, the related leases and the rental incomes they generate. Accordingly, particular attention must be paid to evaluating these assets adequately during the real estate due diligence. Insofar as the due diligence of housing portfolios also takes the potential for privatization of apartments into account (privatization of second order), the standardized valuation methods can only be of limited use. New approaches and methods must therefore be developed to take privatization-related issues into account.

## **2.2 Research Problem**

The steps of analysis (selection of objects), technical preparation of the tenant privatization and sales activities have not yet been discussed together.

As yet, there has been no research that focuses on the assessment of the potentials for privatization of housing stock as part of due diligence processes for housing portfolios. In consequence, the effect of privatization measures on the pricing of portfolios remains an underexplored field. At the same time, it is of crucial importance for the buyer to adequately assess the true potential of housing stock prior to acquisition and to identify viable exit strategies.

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<sup>12</sup> Cf. Siepmann, Axel: Veräußerung von Immobilienportfolios im Rahmen strukturierter Verfahren in Praxis-handbuch Immobilien-Investitionen, Schäfer, Jürgen/Conzen, Georg (Ed.), 2. Run, München 2011, P. 527

<sup>13</sup> Cf. Gondring, Hanspeter/Wagner, Thomas: Real Estate Asset Management, München 2010, P. 232f.

<sup>14</sup> Cf. Reis, Johannes: Due Diligence-Real-Estate – Ein strukturierter Analyseprozess zur ganzheitlichen Beurteilung von Immobilien, Masterthesis, Norderstedt 2005, P. 100

### 2.3 Aims of the proposed research

The primary aim of this thesis project is to develop a method for systematically including an assessment of the potential for privatization into the due diligence process for transactions involving large housing portfolios. This method is to build upon existing valuation approaches, as well as on actual experience gained in tenant privatization programs.

In order to be of practical relevance, the developed methods should be sensitive to the following aspects:

- reasonable time effort (Transactions organized as structured bidding processes usually provide only a very narrow timeframe within which to conduct the due diligence)
- measures should be conducted at a reasonable cost (Focus must be on portfolio analyses rather than on individual assessments of assets)
- Analysis of the potential for privatization
  - Market-level analysis (Micro and Macro)
  - Object-level analysis (suitability of the house)
  - Tenant-level analysis (credit-worthiness, purchasing power, status)
- Establishing privatization priorities (Develop a list of relevant criteria and a scoring-model)

#### Sales Prices

- Sale pricing for Tenant privatization, differentiated according to target group
  - Tenants
  - Buyers of vacant apartments
  - Capital investors (i.e. buyers of rented apartments)
- Set target sales periods for tenant privatization efforts
- Target sales quotas set for tenant privatization efforts
- Sales-scenarios for tenant privatization
- Multiples for block sales



In addition, the following aspects could also be analyzed

- Desktop-analysis versus drive-by analysis
- Comparable objects taken from other tenant privatizations
- Unit Prices as-is versus Prices after renovation
- Assumptions about the technical condition of the buildings
- Recommendations concerning tenant privatization
- Assumptions about the fluctuation rate
- Assumptions about the development of rents for existing rental contracts
- Assumptions about rents for new leases

The model must be adjusted to reflect the specifics (databases, data space) of each actual case and must be adjusted to (external) requirements. Such a model is to be developed as the "Privatization-Analysis-Model" (Short: PAM).

Drawing upon the longstanding experience of the author as a project manager for due diligence processes (the author has been active in the field since the late 1990's), the thesis project is to examine answers to the following research issues:

1. Can an exit-oriented valuation analysis be developed around the application of the Privatization-Analysis-Model (PAM)?
2. How can the structure and organization of a due diligence team "tenant privatization" be optimized?
3. What are the components of an appropriate structure for a documentation database (Work and results database)?<sup>15</sup>
4. What are appropriate procedural steps in due diligence analyses of residential real estate (both desktop-level and drive-by inspection)?
5. What are criteria for successful tenant privatization?
6. How does price differentiation apply to tenant privatization measures?
7. What assumptions must be taken into account in a (privatization) sales scenario?
8. How does one ensure quality assurance for the results database and the Due Diligence Report?

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<sup>15</sup> Work and results database: In order to process the information collected, a database is to be compiled. This makes it possible to unify computational algorithms. The results are transferred into a results database for each client.

### Benefits for the practical community

The Privatization-Analysis-Model (PAM) shall be developed based on the evaluation of several actual large-scale residential portfolio transactions. The model's contribution is that its focus lies not only on evaluating the portfolio's value at acquisition, but that it also incorporates aspects of the investor's exit strategy into the assessment of the portfolio's worth and can be applied to managing certain aspects of that exit strategy.

- Calculated prices and data from the results database can be entered into investors' investment models. They help structure pricing decisions and support the decisions regarding the purchase of the portfolio in question.
- By providing unit prices, sales quotas and information on the timeframes involved, future cash flows can be planned.
- In addition, the sales scenarios and the values determined can provide funding banks with important additional information to base their financing-decisions upon.
- In the case of a successful bid, the privatization strategy developed from the Privatization-Analysis-Model (PAM) can be commenced without delay. This generates liquidity that can become part of the refinancing.
- The PAM can be customized to apply to and reflect the actual conditions of each new portfolio transaction.
- Outside of bidding processes, PAM provides the asset manager with a valuable tool for analyzing the potentials for privatization in the housing stock. The housing stock suitable for tenant privatization can be identified precisely and with relatively little effort.

The Privatization-Analysis-Model (PAM) promises to provide a novel contribution to the due diligence of real estate in general, the evaluation of housing stock and the tenant privatization process.

- Portfolio analyses concerning the potentials of Tenant privatization in large numbers: The PAM links the issues of residential real estate transactions, due diligence, unit and portfolio valuation and tenant privatization with one another.

- An approach is chosen that develops a scientific contribution of great practical relevance from several case studies.

The practical relevance of the proposed thesis is identified most clearly in the development of the Privatization-Analysis-Model (PAM), which can be applied to future housing portfolio transactions, and which can also be modified to become a useful tool for asset managers to identify objects suitable for tenant privatization measures.<sup>16</sup>

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<sup>16</sup> Cf. Gutbrod, Corina: Wohnungsprivatisierung zwischen Kapitalmarkt und Versorgungsauftrag, Diplomarbeit, Stuttgart 2007, P. 41

### 3. Overview of current research

In this section, an overview is to be given of the German residential real estate market and of the large portfolio transactions that have been taking place since the late 1990s. Furthermore, the concepts of 'due diligence real estate' and 'due diligence tenant privatization' are to be presented. As part of the dissertation thesis, the specifics of both fields of 'due diligence' activity are to be further developed.

The dissertation will include one chapter on the theory of residential real estate markets. This chapter will cover both an assessment of the historical importance of housing markets and an account of the orthodox theory of housing real estate. A distinction is to be made between the elements of housing economics and issues pertaining to the economic good 'housing'. Relevant aspects of both the micro-structure of housing markets and the financing of portfolio transactions are to be covered.<sup>17,18,19</sup> This exposé provides a first overview of these issues.

#### 3.1 Overview of the housing portfolio market

This chapter elaborates on the overarching topic of the dissertation project and the research question. Furthermore, the author presents gaps in current scholarly literature. This provides the framework for presenting the aims and relevance of this thesis project.

##### 3.1.1 Changes in the Market

The reunification of Germany and the abolishment of the public-utility status of housing companies (*Wohnungsgemeinnützigkeit*) in 1990<sup>20</sup> have had far-reaching consequences for the German housing market. To appreciate these developments, one must differentiate regional characteristics: Following reunification, East German cities were marked by major rehabilitation programs, during the courses of which they adjusted their portfolios if and where there

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<sup>17</sup> Vgl. Smith, Susan/Munro, Moira: *The Microstructures of Housing Markets*, New York 2009

<sup>18</sup> Vgl. Monk, Sarah/Whitehead, Christine: *Making housing more affordable*, Oxford 2010

<sup>19</sup> Vgl. King, Peter: *Understanding housing Finance – Meeting needs and making choices*, 2. Aufl., New York 2009

<sup>20</sup> Cf. Heuer, Jürgen: *Die Wohnungsmärkte im gesamtwirtschaftlichen Gefüge* in *Kompendium der Wohnungswirtschaft*, Jenkis, Helmut (Ed.), München 1991, P. 29

was excess capacity. The conditions tied to the subsidization of the East German housing industry, which was organized through a partial acquittal of housing companies' debts under the Old Debt Assistance Law (*Altschuldenhilfegesetz*), led - as a side-effect - to a large wave of privatization measures in the former Eastern Republic and in Berlin. To pay back old debts, the companies converted apartments into condominiums and sold these to their tenants. Since demand remained below expectations, the East German housing associations also resorted converting apartment houses into housing collectives in order to meet their obligations under the Old Debt Assistance Law. Until 1998, substantial tax advantages drew considerable private capital, mostly from former Western Germany, into real estate projects in Eastern Germany and Berlin. However, this led to a misallocation of funds. With the end of tax subsidization, the housing sector completely collapsed in many parts of Eastern Germany. Demographic and migratory trends have had an additional direct impact on the East German housing industry: In rural and structurally weak regions (e.g. former German Democratic Republic, Ruhr-area), the population has declined, while structurally strong regions (e.g. Munich, Stuttgart) have benefited. This has had a direct impact on the vacancy rates of housing stock and has actually resulted in marked rent increases in structurally strong markets.

Towards the end of the 1990's, the Federal Republic of Germany decided to part with some of their housing stock. For example, the housing stock owned by the German postal system, the stock owned by the railroad and the stock of the social security administration were each set to be sold. These offers attracted international investors to Germany.

At the time, the formerly non-profit housing sector generally had the public service mission in mind: "Supply of the broad strata of the population with living space."<sup>21</sup> The arrival of (international) investors who were aiming to buy apartments under a profit-maximizing rationale was a veritable paradigm shift for the existing market players. This paradigm shift first began with the abolition of the public-utility status of housing companies in 1990.<sup>22</sup>

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<sup>21</sup> Cf. Kühne-Büning, Lidwina: Instrumente zur Prognose der Wohnungsentwicklung in Grundlagen der Wohnungs- und Immobilienwirtschaft, Kühne-Büning, Lidwina/Heuer, Jürgen (Ed.), 3. Run, Frankfurt am Main 1994, P. 160

<sup>22</sup> Cf. Heuer, Jürgen: Die Wohnungsmärkte im gesamtwirtschaftlichen Gefüge in Kompendium der Wohnungswirtschaft, Jenkis, Helmut (Ed.), München 1991, P. 22f.

Paradigm shift in the housing industry:<sup>23</sup>

- “Generation shift in the leadership echelons of the real estate industry.
- From conventional 'inventory management' via active 'inventory management' to professional portfolio management and real estate trading companies.
- Necessity to focus on the capital market.
- The historically driven social mandate of the housing industry - to provide affordable housing - has been met.
- Affordable real estate property has become the "modern social mandate".
- New liquidity facilitates investment in housing stock and generates customer satisfaction - tenants develop into customers.
- Maintaining the social component by setting strict Standards.”

### 3.1.2 Demographic Development / Regional Differences

While the global population continues to grow strongly, the situation in Germany is rather different. The federal statistical office has calculated various scenarios under consideration of immigration. Depending on the scenario, the population in Germany is expected to decline from currently over 80 million people to 65-70 million within the next 50 years.

This population trend will have far-reaching consequences for the demand (and future supply) of housing in the mid- and long-term. For the housing sector, the evolution of the number of households is of great importance. In contrast to the overall population, the number of households is expected to increase over the next years. In particular, the number of households with 1 or 2 persons will increase. In contrast, the number of households with three, four or more people is expected to decline. Overall, however, the demand for single- and two-person housing predominates and a net increase in demand for one million apartments is expected for the next ten years. Then, however, the demographical developments are expected to overcompensate demand. The Empirica Vacancy Index shows the anticipated vacancy rates for each region. The lower the vacancy rate, the higher the demand will be, and vice versa. According to

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<sup>23</sup> Reddehase, Rainer: Investitionen in Wohnimmobilien Due Diligence – Wohnungsprivatisierung und Marketing, Vorlesungsskript DHBW, Stuttgart 2010, P. 97 (Translation)

empirica, there were about 20 million flats (apartments in residential buildings with three or more apartments) in Germany in late 2009.

**Figure 1: Empirica Vacancy Index - by federal state**

<b>Empirica Vacancy Index 2009</b>				
No.	Federal State	Housing stock Flats in Residential buildings (3 or more flats) 31.12.2009	Vacancy in MFH	
			Qty. Units* (Rounded to 100)	Vacancy rate in %
1	Baden-Württemberg	2,389,902	52,900	2.2%
2	Bavaria	2,720,588	57,800	2.1%
3	Berlin	1,683,054	55,500	3.3%
4	Brandenburg	644,921	36,600	5.7%
5	Bremen	229,055	7,700	3.4%
6	Hamburg	691,863	9,900	1.4%
7	Hessen	1,382,952	39,100	2.8%
8	Mecklenburg-West Pomerania	526,270	27,400	5.2%
9	Lower Saxony	1,495,335	57,200	3.8%
10	North Rhine-Westphalia	4,786,967	171,700	3.6%
11	Rhineland-Palatinate	669,536	23,300	3.5%
12	Saarland	152,861	6,500	4.3%
13	Saxony	1,542,797	119,300	7.7%
14	Saxony-Anhalt	720,775	57,800	8.0%
15	Schleswig-Holstein	614,034	18,000	2.9%
16	Thuringia	593,615	33,300	5.6%
<b>Germany</b>		<b>20,844,525</b>	<b>773,300</b>	<b>3.7%</b>
East (incl. Berlin)		5,711,432	329,900	5.8%
West (excl. Berlin)		15,133,093	444,100	2.9%

**Source: Empirica-Housing Vacancy Index** / heating cost billing of Techem, analyses by empirica and by the federal statistical office (housing stock), slightly modified

There are large regional discrepancies in the development of the population. For example, during the past 10 years, regions such as Munich have grown considerably, while regions in Saxony, Saxony-Anhalt, Mecklenburg-Western Pomerania and parts of the Ruhr-region have witnessed dramatic declines in population.

But not only existing apartments have an impact on supply, also new buildings. In recent years, however, the number of building permits, as well as of completed units, have decreased continuously. It is only since 2009 that the number of new building permits is on the rise again. This is partly due to the renaissance of residential property following the financial and economic crisis of 2007/2008, and also due to the comparatively attractive interest rates for mortgages.<sup>24</sup>

<sup>24</sup> Cf. Reddehase, Rainer: Renaissance der Wohnimmobilien – Chance 2009, Stuttgart 2009

### 3.1.3 Development of rents and of sale prices

On average, the net rents in Germany have been rising by about 2% per annum. In 2010, inflation was at 3.4%. Furthermore, rent levels vary widely by region. On average, rents were at 5.12 €/sqm per month in 2008/2009, according to IVD, the German Real Estate Association (*Immobilienverband Deutschland*). In large cities, average rents of between 7.10 and 9.70 €/sqm per month are typical.

Housing prices have been relatively stable in Germany over the past 40 years. In contrast to the USA and Spain, there was not a strong increase in prices during the past 10 years. That is why there has been no real estate bubble in Germany. However, since 2009, demand for residential real estate is rising sharply in Germany. Prices are beginning to rise.

The housing market in Germany has bottomed out and is entering a phase of revival. The so-called Spring report of Real Estate (*Frühjahrgutachten der Immobilienwirtschaft*) predicts an average price increase of 3-4% for purchasing prices for condominiums. But here, too, there are strong regional variations.<sup>25</sup>

### 3.1.4 Home ownership rates in European comparison

For years, the home-ownership rate in Germany, i.e. the rate of owner-occupied housing, has remained at 43%. Compared to other European countries, this is quite low. Accordingly, many investors see a strong backlog of demand. In general, the home ownership rate is higher rural than it is in urban areas, and it is higher in the west than in the east of Germany. Furthermore, there is a positive correlation between home ownership and salary.<sup>26</sup>

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<sup>25</sup> Cf. Simons, Harald: Frühjahrgutachten Wohnimmobilien 2011 in Frühjahrgutachten Immobilienwirtschaft 2011 des Rates der Immobilienweisen, Wiesbaden 2011, P. 142ff.

<sup>26</sup> Cf. Reddehase, Rainer: Investitionen in Wohnimmobilien Due Diligence – Wohnungsprivatisierung und Marketing, Vorlesungsskript DHBW, Stuttgart 2010, P. 13f.



### 3.1.5 Demand behavior of users

In Germany there are more tenants than homeowners. However, the majority of the population desire home ownership. Due to the historically low interest rates (currently ca. 4% as compared with historical rates of ca. 7%), homeownership will become affordable for an increasingly large share of the population. This is reflected in the affordability index of Deutsche Bank. The currently observable "run on material assets" generates additional demand. This thesis is also to examine the demand behavior of buyers of existing properties.

### 3.1.6 Seller-side of housing associations

Besides private and formerly public utility housing companies, housing associations and private corporations, the public authorities (federal, state and communes) themselves also used to own more than 3 million housing units. While many of the apartments belonging to the federal republic and the federal states have been sold off in the meantime, the communes still own more than 2 million housing units.

Besides the professional housing sector, private investors also own a large part of the housing stock.

In keeping with the definition provided by Andreas Strunk, a distinction shall be made between first order and second order privatization.<sup>27</sup> First order privatization refers to the privatization of property held by the state. For example, when state-run organizations are taken public (e.g. via IPO) or when they are sold to an investor. Generally, the revenues generated are used to consolidate the household.<sup>28</sup> This case constitutes first order privatization. When housing companies sell single condominiums, terraced houses or single buildings (small block sales), this also constitutes an act of privatization. Insofar as the conversion of rental housing into condominiums is concerned, this is to be termed 'tenant privatization'. In accordance with Strunk's definition, this latter case is to be called second-order privatization.

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<sup>27</sup> Cf. Strunk, Andreas: Planung und Management kommunaler Wohnungspolitik, Wernau/Neckar 2003, P. 7 <http://www.gisambh.de/textpool/planmanagkommwohnpol.pdf> (Accessed 2011-04-18)

<sup>28</sup> Cf. Roßberg, Ingolf: Die marktorientierte Umstrukturierung kommunaler Kultureinrichtungen – Besonderheiten und Lösungsansätze, Marburg 2007, P. 8

The following reasons have been given for the public sector, but also for industrial companies, to sell their housing stock and sub-portfolios and/or to pursue active strategies of tenant privatization:<sup>29</sup>

- "Popular type of sales strategy with a promising revenue perspective.
- Shareholder value.
- Focus on those core properties and assets required for production only (industry).
- Reduction of the amount of capital tied up in the housing assets and in ongoing modernization and maintenance measures.
- Supporting employees in capital formation by enabling the acquisition of property (industry).
- Homeownership as a corporate contribution to the retirement provisions of the tenants.
- Making homeownership available to broad segments of the population.
- Mitigation and prevention of social hotspots through home ownership
- Improvement of the social structure.
- Reduction of the costs involved for personnel, administration and maintenance expenditure incurred by the stock.
- Raise capital for other municipal tasks.
- Optimization of the real estate portfolio.
- No mid-term improvement of the economic situation is to be expected given the restrictions imposed by the (tenant-friendly) tenant laws“

### 3.1.7 Buyer-side of housing companies

The buyers of large housing companies in Germany were almost always international financial investors. Only in the case of the railroad flats (*Eisenbahnerwohnungen*), part of the apartments went to so-called Regional Development Companies (*Landesentwicklungsgesellschaften, LEG's*). The aim of the financial investors was to optimize the organizational struc-

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<sup>29</sup> Reddehase, Rainer: Investitionen in Wohnimmobilien Due Diligence – Wohnungsprivatisierung und Marketing, Vorlesungsskript DHBW, Stuttgart 2010, P. 97 (Translation)

tures of the acquired housing companies. To achieve their goals, they installed new staff both at the executive and at operational level. Ongoing expenditures were reduced (e.g. reduction of maintenance costs) and revenues were increased (rents, tenant privatization measures).<sup>30</sup> This thesis is concerned with revenue increases generated through tenant privatization measures.

### 3.2 Realized large-scale portfolio transactions (>50,000 homes)

Since 2000, over 1,000,000 homes in Germany have been sold. The following are the six largest residential real estate transactions, each trading over 50,000 apartments (more than 500,000 units in total):

- Railway Flats (*Eisenbahnerwohnungen*) (2000) - 114,000 Apartments
- GAGFAH, Essen (2004) - 82,000 Apartments
- GSW, Berlin (2004) - 67,000 Apartments
- Viterra, Bochum (2005) - 140,000 Apartments
- WOBA Dresden (2006) - 50,000 Apartments
- LEG NRW (2008) - 93,000 Apartments

The sale of the railway workers' homes (owned at the time by the *BEV, Bundeseisenbahnvermögen*) had first been planned to take place in 1997. As part of a bidding process, the Japanese bank Nomura offered DM 1 billion more than a consortium around the German Regional Development Companies (*Landesentwicklungsgesellschaften, LEGs*). And yet, the LEGs were at first awarded the bid. However, this was contrary to European law. The entire bidding process therefore had to be repeated. In the second run conducted in 2000, Nomura was awarded the bid for 64,000 residential units and the rest of the stock went to the LEG-consortium. As a platform for managing the newly acquired stock, Nomura founded the “Deutsche Annington Real Estate GmbH”, which manages the 64,000 flats today. In the following years, a series of major tenant privatization programs were initiated.

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<sup>30</sup> Cf. Gondring, Hanspeter/Wagner, Thomas: Real Estate Asset Management, München 2010, P. 350

The sale of GAGFAH, Essen (sold by the Federal Institute for Salaried Employees, *Bundesanstalt für Angestellte* / 82,000 Apartments) in 2004 set off a veritable wave of portfolio transactions. Fortress, a financial investor, paid the highest bid for the housing stock distributed across the entire republic. In 2006, GAGFAH was taken public. Together with the other companies that have been bought and incorporated into GAGFAH since (*NILEG*, Hanover, *GBH*, Heidenheim and *WOBA*, Dresden), GAGFAH is the largest publicly listed housing company in Germany today.

Also in 2004, the Berlin senate sold the housing company GSW (67,000 housing units) to Whitehall, a fund set up by Goldman Sachs and Cerberus. In 2008, the same fund acquired the Regional Development Company of North Rhine-Westphalia (*LEG NRW*) with 93,000 housing units. In 2011, the GSW was taken public in an IPO.

In 2005 Viterra was acquired by Deutsche Annington. Barring the insolvency of the *Neue Heimat*<sup>31</sup>, the sale of Viterra with 140,000 housing units has been the single largest residential real estate transaction in Germany to date. With the acquisition of Viterra, Deutsche Annington has become the largest non-listed housing company.

All the companies have actively pursued exit strategies. For each portfolio, sales programs had been defined and tenant privatization measures were launched. In most cases, a Social Charta had had to be agreed upon with the former owner of the stock. These chartas contained protective rights for tenants and employees of the sold housing companies. Furthermore, there were also sales conditions and restrictions imposed. Initially, it had been envisaged to apply REIT-status for the companies, i.e. to convert these into the legal form of Real Estate Investment Trusts (REIT). According to the law in Germany, however, existing apartments cannot be included in a REIT. Therefore, in addition to the block sale of assets, in several cases, a partial exit was sought via a going public (IPO) (GSW, GAGFAH).

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<sup>31</sup> Following the bankruptcy of *Neue Heimat*, a housing conglomerate of the German trade unions, the rescue company (*Auffanggesellschaft*) installed in its place started selling off the 200,000 housing units in block sales to the Regional Development Companies (LEG) as well as to private investors.

In the "conventional" housing industry, the alleged infringements of the social chartas agreed upon as part of the sale of the WOBA Dresden, and the sale of LBBW Immobilien planned for 2011 are currently being intensely discussed.

### 3.3 Real Estate Due Diligence

"Due diligence analyses have originated in corporate transaction practice (corporate M&A) and were first developed and applied in the Anglo-Saxon countries. Increasingly, however, they have been adopted and applied in Germany and to other economic sectors, especially to the field of property transactions. The proliferation of cross-border transactions and investments has played an important role in the internationalization of investment methods and valuation strategies. Due diligence analyses are modular, they incorporate information about public-, legal-, fiscal-, taxation-, building-, environmental- and economic aspects of the assets in question. It is the responsibility of the decision-maker to collect the decision-relevant information while taking into account the available time frame, certain information preferences and personnel- and opportunity costs. The aim of the due diligence analysis is to enable a weighing of portfolio-immanent opportunities and threats and strengths and weaknesses, in order to arrive at a justified price. Methods of investment analysis offer the possibility of an objectified basis for decision. The 'real estate due diligence' not only simplifies the purchase price negotiation by systematically documenting existing problems, generating crucial information and reducing information asymmetries, it is also a good basis for stipulating issues that must be made subject to contractual specification. Furthermore, the due diligence process is a step towards integrating the portfolio into the own organizational structure upon acquisition. Finally, it minimizes the probability of legal disputes following the acquisition."<sup>32</sup>

With regards to real estate valuation one must discern between standardized and international valuation procedures. In the valuation of housing portfolios, discounted cash-flow methods (DCF)<sup>33</sup> have become the standard. In the assessment of the potential for privatization of

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<sup>32</sup> Definition of Due Diligence taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 263 (Translation)

<sup>33</sup> Regarding Discounted Cash Flow methods see Schultheiß, Tobias: 100 Immobilienkennzahlen, 2. Run, Wiesbaden 2010, P. 120f.

stock, different sections of the three standardized processes codified in German law (the income valuation, comparative valuation and asset valuation method) are used.<sup>34</sup>

For large transactions, due diligence teams are put together to reflect the respective disciplines. The team responsible for the ‘due diligence tenant privatization’ alone often consists of between 10-30 evaluators and tenant privatization experts. Accordingly, a structured project organization is essential.

Data supplied by the seller (through sales memoranda, a data room, etc.) must be verified and supplemented. In a next step, the verified and completed data must be aggregated with the aim of arriving at a decision-base.<sup>35</sup>

In the case of large transactions, the housing stock is often scattered nationwide. It is therefore of great importance to gain a good understanding of the local situations on the regional housing markets. This is accomplished by analyzing market reports, conducting expert interviews with local brokers and banks and by analyzing the data provided by the local expert committees (*Gutachterausschuss*) and by analyzing the leading brokerage websites. On-site and desktop-analyses are conducted in parallel.<sup>36</sup>

#### Data Processing

- Research
  - Market Reports
  - Rents
  - Comparable prices
  - Local Expert Committees (*Gutachterausschuss*)
  - Second Opinion
- Desktop-Analysis
- Drive-by inspections
- Black box Database

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<sup>34</sup> Arndt, Julia-Katharina: Due Diligence Real Estate – Due Diligence als Analyseinstrument bei Immobilientransaktionen, Saarbrücken 2006, P. 69ff.

<sup>35</sup> Cf. Windorfer, Christian: Bewertung in Immobilientransaktionen – Praxisbuch zur Strukturierung, Vertragsgestaltung und Bewertung, van Kann, Jürgen (Ed.), Berlin 2007, P. 309ff.

<sup>36</sup> Cf. Plötz: Plötz Immobilienführer Deutschland 2011, Köln 2011

### 3.4 Tenant privatization

The conversion of rental apartments into condominiums is referred to as privatization, housing privatization, or tenant privatization, and also as home-ownership formation.<sup>37</sup> In accordance with the definition proposed above, these are all examples of second order privatization. In order to have a clear definition, in the following, the unit sale of condominiums is referred to as tenant privatization.

#### **Privatization of residential properties**

"Tenant privatization is the term for a systematic conversion of rental apartments into condominiums for the purpose of sale. The goal is to sell these condominiums to the tenants, who have a legally enforced right of first refusal and an extended protection against the termination of their rental contracts. The right of first refusal provides the tenant with an opportunity to become homeowners by acquiring their apartment, in which they have often lived for many years. Prior to the exercise of this right of first refusal, the tenant is well-advised to conduct a calculation of the actual cost burden that includes all additional costs incurred at acquisition (property transfer tax, land registration, notary), as well as possible maintenance and refurbishment backlogs. If the condominium is not sold to the tenant, it is usually sold to third parties, either as owner-occupied housing (in the case of vacant apartments) or as a capital investment (if the apartment is rented out)."<sup>38</sup>

Whether or not stock is suited for tenant privatization measures must be analyzed on three levels: on the macro- and micro-level, at the level of the object and at the level of the tenants. The quality of this analysis is decisive for the success of tenant privatization measures. The legal basis for apartment conversions is laid out in the Condominium Act (*Wohnungseigentumsgesetz*). One must therefore further differentiate between technical and sales planning. In parts, these processes are conducted in parallel.<sup>39</sup>

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<sup>37</sup> Deutscher Mieterbund DMB: Wohnen in der Eigentumswohnung – Umwandlung, Kündigungsschutz, Kaufvertrag, Wohnungseigentum, Berlin 2008, P. 3

<sup>38</sup> Definition of tenant privatization taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 594. (Translation)

<sup>39</sup> Cf. Stürzer, Rudolf/Koch, Michael u.a.: Praxisbuch Wohnungseigentum, 3. Run, Freiburg 2010, P. 42ff.

The following is to serve as illustration:<sup>40</sup>

Consulting Research

Technical

assessment Inventory of stock

On-site inspection

Analysis of the topography

Project management - technical implementation

Seclusion Certification (§ 7 (4) WEG - German Condominium Act (*Wohnungseigentumsgesetz / WEG*))<sup>41</sup>

Division approval Code (*Teilungsgenehmigung*) § 19 BauGB<sup>42</sup>/ State Building Codes (*Landesbauordnungen*)

Certification of the division of the building into condominiums

Technical follow-up

Sales

Formulation of a draft purchase agreement

Specification of the sales concept

Financial engineering approach

Determining sales prices

Sales release

Preparation of sales process

Tenant offers (i.e. purchase offer presented to tenants)

Tenant advisory services

Documentation of tenant advisory process (counseling protocol)

Tenant follow-up advisory

Notarial preparations

Information meetings

Contract of sales deeds

Vacant apartment sales

Sale of apartments to capital investors

1. Homeowners' meeting

<sup>40</sup> Cf. Reddehase, Rainer: Investitionen in Wohnimmobilien Due Diligence – Wohnungsprivatisierung und Marketing, Vorlesungsskript DHBW, Stuttgart 2010, P. 62

<sup>41</sup> WEG: Wohnungseigentumsgesetz - Gesetz über das Wohnungseigentum und das Dauerwohnrecht (Condominium Act)

<sup>42</sup> BauGB: Baugesetzbuch (Building Code)



## 4. Specifying the topic of the dissertation

The dissertation project is related to existing literature and thereby further specified with regard to its intended scope.

### 4.1 Relating the dissertation topic to existing literature

So far there has been no definitive research on tenant- and housing privatization, i.e. the conversion of rental housing to condominiums, in Germany. Not even the "*Handbuch Wohnungsprivatisierung*" (Handbook on housing privatization) can provide adequate assistance, as this turns out to be primarily a handbook for an IT-based sales management program.<sup>43</sup> While several scholarly contributions have analyzed the privatization of housing stock under the Old Debt Assistance Law (*Altschuldenhilfegesetz*), which applies to East Germany and Berlin,<sup>44,45</sup> these, too, have been limited to partial analyses of the conversion process (e.g. with a focus on legal aspects<sup>46</sup>). In her diploma thesis, Dagmar Striedinger has analyzed influence factors affecting the purchasing decisions following unit conversions.<sup>47</sup>

There is a lot of literature in the field of property assessment (standardized and international procedures),<sup>48,49,50,51,52,53</sup> as well as on M&A Transactions (Mergers & Acquisitions),<sup>54</sup> due

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<sup>43</sup> Cf. Reifenrath, Frank/Grah, Marcus: *polyEstate 7.1 – Ein Handbuch Wohnungsprivatisierung*, Norderstedt 2004

<sup>44</sup> Cf. Plesse, Holger: *Wohnungsprivatisierung in den neuen Bundesländern, Wirtschaftliche Ziele und Umsetzungsmöglichkeiten von Wohnungsverkäufen an Mieter*, Dissertation, Berlin 1999

<sup>45</sup> Cf. Freia Steinmetz: *Wohnungsprivatisierung in den neuen Bundesländern unter besonderer Berücksichtigung ländlicher und verstädterter Räume: Eine Analyse im Kontext europäischer Privatisierungsprogramme*, Dissertation, Hannover 2003

<sup>46</sup> Cf. Ruge, Niki: *Begründung von Wohnungseigentum an Bestandsimmobilien*, Hamburg 2009

<sup>47</sup> Cf. Striedinger, Dagmar: *Die Umwandlung von Miet- in Eigentumswohnungen – Einflußfaktoren der Kaufentscheidung*, Diplomarbeit, Universität Leipzig, 2002

<sup>48</sup> Cf. Simon, Jürgen/Kleiber, Wolfgang: *Schätzung und Ermittlung von Grundstückswerten*, Berlin 1996

<sup>49</sup> Cf. TEGOVA: *Europäische Bewertungs Standards 2003, 2. Run*, Bonn 2003 (Originaltitel: *European Valuation Standards 2003*)

<sup>50</sup> Cf. Bayerlein, Walter: *Praxishandbuch Sachverständigenrecht*, München 2002

<sup>51</sup> Cf. Kleiber, Wolfgang: *WertR06 – Wertermittlungsrichtlinien und ImmoWertV 2010, 10. Run*, Köln 2010

<sup>52</sup> Cf. Metzger, Bernhard: *Wertermittlung von Immobilien und Grundstücken, 4. Run*, Freiburg 2010

<sup>53</sup> Cf. Varthe, Thomas: *Die Wertermittlungsreform – Neue Grundsätze bei der Immobilienbewertung, 2. Run*, Freiburg 2010

<sup>54</sup> Cf. Schramm, Marianne/Hansmeyer, Ekkehart (Ed.): *Transaktionen erfolgreich managen. Ein M&A-Handbuch für die Praxis*, München 2010

diligence and portfolio evaluation.<sup>55</sup> The thesis of Stefan Haas deserves further mention. Haas has developed a model for taking risk into account while assessing residential real estate portfolios.<sup>56</sup> But in his analysis, Haas does not take into account the potentials for privatization of housing stock as an important value driver either.

Concerning the sellers side, there have been studies on the motives for second-order privatization (i.e. privatization of assets by the public authorities).<sup>57</sup> Amongst others, Livia Leipold has discussed the city of Dresden's motives for selling WOBA Dresden.<sup>58</sup> While much research has been done on examining portfolio sellers' motives, in my work, I shall also discuss the motives of buyers.

#### 4.2 Specifying the topic of the dissertation

The evaluation of the housing stock and the financial model will be of primary importance for the buyer side in deciding the purchasing decision. The author was involved in several large housing portfolio transactions as the Project Manager responsible for the due diligence teams charged with assessing the potentials for tenant privatization (due diligence tenant privatization).

The financing models of investors are not the focus of the dissertation, nor does the dissertation deal with commercial real estate, but exclusively with residential properties. The important evaluation criteria have been distilled from the large number of the examined large and small housing portfolios. Existing evaluation procedures have been developed further for the portfolio analysis. The aim is to generalize the experience gained in these procedures and to discuss the identified best practices. The findings are to culminate in the Privatization-Analysis-Model (PAM) that is to be developed as part of this thesis project.

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<sup>55</sup> Cf. Brühl, Martin/Jandura, Isabelle: Due Diligence und Transaktionsstrukturierung aus Käufersicht – Kaufmännische Prüfung: Immobilieneinzel- und – massenbewertung in: Handbuch Real Estate Private Equity, Rebitzer, Dieter/Rottke, Nico (Ed.), Köln 2006, P. 193ff.

<sup>56</sup> Cf. Haas, Stefan: Modell zur Bewertung wohnwirtschaftlicher Immobilien-Portfolios unter Beachtung des Risikos, Dissertation Bergische Universität Wuppertal, Wiesbaden 2010

<sup>57</sup> Cf. Heyda, Rene: Analyse der Möglichkeiten und Risikofaktoren von Privatisierungsmaßnahmen am Beispiel eines kommunalen Wohnungsunternehmens, Diplomarbeit, Norderstedt 2008

<sup>58</sup> Cf. Leipold, Livia: Die Privatisierung von kommunalen Wohnungsbaugesellschaften und deren Auswirkung auf stadtpolitische Handlungs- und Gestaltungsspielräume – Das Beispiel der Privatisierung der WOBA DRESDEN GMBH, Wissenschaftliche Hausarbeit, Neuhaus am Rennweg 2006

## 5. Theses

Thesis 1: "It is possible to develop a model that allows for a systematic due diligence of the potential for privatization of the housing stock."

The current practice of portfolio analysis has generally centered exclusively on the real estate value of the houses, drawing upon discounted cash-flow methods (DCF-methods). This approach to portfolio valuation is to be extended to take into account the potentials for tenant privatization of the individual houses. The complexity of interrelating these different disciplines poses several challenges. Therefore, as yet, there has not been developed a standard model. Such a model is to be developed as part of this thesis project.

Thesis 2: "Implementation of the Privatization-Analysis-Model (PAM) will enable an assessment of residential property under the criterion of revenue maximization."

The result of the portfolio analysis will help investors establish their pricing in transaction processes. The PAM will enable an estimation of the revenues that can be achieved by tenant privatization measures. A viable portfolio strategy<sup>59</sup> can be developed from the analysis using PAM.

Thesis 3: "Applied as part of a bidding process, the Privatization-Analysis-Model (PAM) enables a timely and cost effective solution to analyzing large housing stock, particularly compared to the single assessment of units."

It is to be shown that the PAM can be applied to portfolios of different sizes, irrespectively of whether 1,000, 10,000 or 100,000 housing units are to be examined for their potential for privatization. Compared to the results of single assessments, the application of PAM promises significant time and cost savings.

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<sup>59</sup> Cf. Lehner, Claus: Erfolgreiches Portfolio- und Asset Management für Immobilienunternehmen – Die 8 Werthebel, Wiesbaden 2010, P. 111ff.

Thesis 4: "Establishing a link between portfolio valuation and tenant privatization measures allows a differential valuation of apartments depending upon the respective buyer groups."

The target buyer groups can consist of tenants who want to purchase their apartment (tenant privatization), of buyers interested in purchasing a vacant apartment, and of buyers interested in purchasing a rented apartment. Discerning between these three buyer types has not been possible in the conventional evaluation approaches. In practice, the differentiation of prices only took place after the acquisition, in the context of actual tenant privatization.

Thesis 5: "The application of the newly developed Privatization-Analysis-Model (PAM) significantly facilitates an exit-oriented valuation."

With the PAM, a tried and tested model is provided with which the assessment of very large housing portfolios is made much easier. However, the application of the PAM requires a deeper understanding of property valuation methods and tenant privatization measures. Each project will have a different underlying set of data and the model must be adjusted accordingly. An exit-oriented valuation of housing portfolios is thereby made possible.

Thesis 6: "The Privatization-Analysis-Model (PAM) can also be used to manage existing portfolios. Owners of existing portfolios can apply the PAM to examine their own stock for potentials for privatization. "

If this thesis is confirmed, then the PAM can be applied not only in the context of due diligence procedures, but also as a consulting tool for housing companies in general. Implementing PAM places a focus of portfolio analysis on aspect of tenant privatization.

## 6. Methodology

The development of the Privatization-Analysis-Model (PAM) may be an outcome of this thesis. Given this basic structure, the following outline seems appropriate:

### The Privatization-Analysis-Model (PAM)

1. Structure and organization of a due diligence team ‘tenant privatization’
2. Data Processing
  - Research
    - Market Reports
    - Rents
    - Comparable prices
    - Expert Committees (*Gutachterausschuss*)
    - Second Opinion
  - Desktop-Analysis
  - Drive-by inspections
  - Black box Database
    - Tenant Sales Price
    - Vacant Apartment Price
    - Capital Investor Price
    - Block Sales Price
3. Establishing privatization priorities
4. Establishing sales scenarios
5. Quality Control
6. Results database
7. Plausibility check
8. Due Diligence Report tenant privatization, including market reports
9. Review Session

The following steps are planned to develop the model: The thesis is to provide an in-depth discussion of methods of due diligence real estate, including issues of object- and portfolio evaluation methods. Furthermore, tenant privatization strategies are to be analyzed. Separate

chapters are to be devoted to discussing both of these issues in the thesis. Subsequently, the two issues are to be related to one another in order to develop the Privatization-Analysis-Model (PAM). This process is to be informed by the author's experience gained by accompanying several of the largest residential portfolio transactions in Germany. Generalized rules are to be derived from an analysis of the largest residential real estate portfolio transactions conducted during the past 15 years.

Insofar as the actual bidding processes are concerned, the participants generally had to sign confidentiality agreements. Therefore, only limited reference can be made to original documents generated in the bidding processes. If necessary, permissions can be obtained, but blocking notes must be adhered to.

The public closely followed the bidding processes for the housing portfolios. Accordingly, the processes received a lot of medial coverage. Therefore, this thesis project shall analyze archives of relevant trade magazines, such as the *'Immobilienzeitung'*, which provides extensive information about the transactions.

Only few valuation specialists in Germany are able to analyze thousands of apartments as part of a single due diligence process. The number of firms that are additionally able to conduct an analysis of the potential for privatization of housing stock in the case of large-scale portfolio transactions is also very limited. It therefore seems appropriate to contact these specialist firms and to develop (and confirm) the specific nature of their business models through interviews. Furthermore, interviews are planned with the representatives of buyers and sellers. Data that is collected is to be analyzed and interpreted using appropriate methods, including statistical regression analyses of quantitative data.

On the basis of modeled data, a working database and a results database are to be simulated. These can be used as templates for future transactions and shall become part of the Privatization Analysis Model (PAM). Furthermore, a schema is to be developed for the classification of projects according to their privatization priorities. A criteria catalogue for successful privatization strategies is to be developed. Also, a sales scenario is to be modeled as a possible exit strategy. As verification, the simulation models shall be compared with the success of actual tenant privatization measures.

## **7. Proposed thesis outline**

In the study, residential real estate portfolio transactions, real estate due diligences and tenant privatization measures are each investigated. In the introduction, the research interest and the overall complexity of the topic are to be presented. Then follows a discussion of the existing literature and a formulation of the specific objectives of this thesis.

Chapter two is to provide an assessment of the role of housing markets, both from a historically informed, as well as from a theoretically informed, position.

Chapter three is to provide an overview of the current situation on the German housing market and is to introduce the different actors and their motives for action.

The thesis is to be developed around the large residential real estate transactions (>50,000 units) and the associated bidding processes. In chapter 4, the six largest transactions that have taken place since the late 1990's are to be analyzed and compared with one another.

In Chapters 5 and 6, the methods of real estate due diligence and of tenant privatization measures are to be presented separately. Both the standardized procedures of single property valuation and aggregate methods of portfolio valuation play an important role. An account of the processes involved in the conversion of rental apartments into condominiums provides an opportunity to showcase the entire breadth of tenant privatization measures, from the selection of suitable objects to their technical preparation and pricing deliberations.

In Chapter 7, the methods of the real estate due diligence (chapter 5) and of tenant privatization measures (chapter 6) are brought together as part of a larger due diligence process. Drawing upon experience gained during some of the largest residential real estate transactions (Chapter 4), the Privatization-Analysis-Model (PAM) is to be developed.

Finally, in Chapter 8, the empirical findings are to be interpreted and developed into a summary and an outlook.

### Outline of the proposed thesis

1. Introduction
2. Theoretical base of Housing Market
3. Housing market - Germany
4. Previous large transactions
5. Real estate due diligence
6. Tenant privatization
7. Development of the Privatization-Analysis-Model (PAM)
8. Significance of the Privatization-Analysis-Model (PAM)
9. Summary and outlook

### Possible detailed outline of the proposed thesis:

1. Introduction
  - 1.1 Introductory problem
  - 1.2 Limitations of the existing literature
  - 1.3 Layout of the thesis
    - 1.3.1 Structure
    - 1.3.2 Research objective
    - 1.3.3 Benefits
2. Theoretical base of Housing Market
  - 2.1 Historical background information
  - 2.2 The housing economy and the economic good of housing
  - 2.3 Theory of real estate market – the supply & demand of housing
  - 2.4 Current Trends



### 3. Housing market - Germany

- 3.1 Changes in the market
- 3.2 Demographic developments (and regional differences)
- 3.3 Development of rents and sale prices
- 3.4 Home ownership rates in a European comparison
- 3.5 Demand behavior of users
- 3.6 Seller-side of housing associations
  - 3.6.1 Motives
  - 3.6.2 Sales options
- 3.7 Buyer-side of housing companies
  - 3.7.1 Motives
  - 3.7.2 Purchasing opportunities

### 4 Previous large-scale transactions (50,000 homes)

- 4.1 Railway Workers Flats (*Eisenbahnerwohnungen*) (2000) - 114,000 Apartments
- 4.2 GAGFAH, Essen (2004) - 82,000 Apartments
- 4.3 GSW, Berlin (2004) - 67,000 Apartments
- 4.4 Viterra, Bochum (2005) - 140,000 Apartments
- 4.5 WOBA Dresden (2006) - 50,000 Apartments
- 4.6 LEG NRW (2008) - 93,000 Apartments
- 4.7 Outlook

### 5 Real Estate Due Diligence

- 5.1 Due diligence in general
  - 5.1.1 Definition of terms
  - 5.1.2 Disciplines
  - 5.1.3 Sales memorandum
  - 5.1.4 Inventory database
  - 5.1.5 Data room
  - 5.1.6 Drive-by analysis
  - 5.1.7 Management presentation
  - 5.1.8 Q & A session

- 5.1.9 Due diligence report
- 5.1.10 Review session - price meeting
- 5.2 Special features of residential real estate
  - 5.2.1 Checklist for real estate in general
  - 5.2.2 Checklist for residential real estate
- 5.3 Property valuation
  - 5.3.1 Standardized valuation methods
  - 5.3.2 Portfolio analysis
- 6 Tenant privatization
  - 6.1 Importance of second-order privatization
  - 6.2 Legal codification of housing - the German condominium act (WEG)
  - 6.3 Consulting
    - 6.3.1 Market Analysis
    - 6.3.2 Object/Unit analysis
    - 6.3.3 Tenant analysis
  - 6.4 Technical planning and implementation
    - 6.4.1 Condominium Act (*Wohnungseigentumsgesetz*)
    - 6.4.2 Legal requirements
    - 6.4.3 Technical features
  - 6.5 Sales strategy and implementation
    - 6.5.1 Price differentiation according to target groups
    - 6.5.2 Privatization priorities
    - 6.5.3 Sales scenario
- 7 Development of the Privatization-Analysis-Model (PAM)
  - 7.1 Structure and organization of a due diligence team 'tenant privatization'
  - 7.2 Data processing
    - 7.2.1 Research
    - 7.2.2 Desktop-analysis
    - 7.2.3 Drive-by inspections
    - 7.2.4 Black box database

7.3 Establishing privatization priorities

7.4 Establishing a sales scenarios

7.5 Quality Control

7.6 Results database

7.7 Plausibility check

7.8 Due diligence report tenant privatization, including market reports

7.9 Review session

7.10 Best practice

8 Significance of the Privatization-Analysis-Model (PAM)

8.1 Methods of Data analysis

8.2 Statistical Regression Analysis

9 Summary and Outlook

## **8. Summary and Outlook**

This thesis project is the first to attempt combining due diligence methods in residential real estate transactions with the field of tenant privatization strategies. This leads to entirely new approaches to property valuation in the course of transactions. The Privatization-Analysis-Model (PAM) promises to provide substantial impetus to the valuation of housing portfolios. For the first time, the PAM is to combine property valuation, portfolio valuation, a differentiated analysis of regional submarkets (micro- and macro-locations), object- and tenant analysis, price differentiation by target buyer group and exit strategy (sales strategy) in a scientific manner. Experience gained during large residential portfolio transactions shall reveal the critical factors for future projects. The PAM is of use to real estate investors in that it provides tangible benefits both in terms of time-savings and economic savings and it can be modified to assist asset managers in analyzing the privatization-related value drivers of their housing stock. In this manner, the PAM may be developed into a consulting tool that facilitates portfolio-analyses that take privatization potentials systematically into account.

## Glossary

### **Discounted cash flow method**

"The discounted cash flow method (DCF method) was originally developed for evaluating the value of companies. This remains the primary application of the method. However, the DCF-method has been developed and applied to property valuation as well. While opinions differ about the effectiveness of applying this procedure to property valuations, the DCF-method provides an alternative valuation approach to the income valuation approach (*Ertragswertverfahren*). As in the case in the income valuation approach, the net returns are discounted to the valuation date. However, in contrast to the income valuation approach, the DCF-method takes an anticipated development of the net returns for a specific timeframe into account. The discount rate is not derived from the property rate, but from the bond market. While the income approach aims at deriving an 'objective value', the discounted cash-flow method provides a decision-base for specific investors, conditional upon that investor's temporal horizon and assessment of the risk associated with the investment. The difficulty of forecasting is an impediment to the Discounted Cash-Flow method, particularly when the temporal horizon is extended far into the future."<sup>60</sup>

### **Due Diligence**

"Due diligence analyses have originated in corporate transaction practice (corporate M&A) and were first developed and applied in the Anglo-Saxon countries. Increasingly, however, they have been adopted and applied in Germany and to other economic sectors, especially to the field of property transactions. The proliferation of cross-border transactions and investments has played an important role in the internationalization of investment methods and valuation strategies. Due diligence analyses are modular, they incorporate information about public-, legal-, fiscal-, taxation-, building-, environmental- and economic aspects of the assets in question. It is the responsibility of the decision-maker to collect the decision-relevant information while taking into account the available time frame, certain information preferences and personnel- and opportunity costs. The aim of the due diligence analysis is to enable a weighing of portfolio-immanent opportunities and threats and strengths and weaknesses, in order to arrive at a justified price. Methods of investment

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<sup>60</sup> Definition of Discounted Cash Flow Methods taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 256. (Translation)

analysis offer the possibility of an objectified basis for decision. The 'real estate due diligence' not only simplifies the purchase price negotiation by systematically documenting existing problems, generating crucial information and reducing information asymmetries, it is also a good basis for stipulating issues that must be made subject to contractual specification. Furthermore, the due diligence process is a step towards integrating the portfolio into the own organizational structure upon acquisition. Finally, it minimizes the probability of legal disputes following the acquisition."<sup>61</sup>

### **Income valuation approach**

"The income valuation approach involves deriving the building's net incomes by subtracting the interest on land value and the management- and maintenance costs from the net rent inflows. A building's income value is calculated by multiplying the building's net income by a multiple that is derived from the property rate and the remaining duration of the expected period of use. The ownership value of the housing unit is the sum of the value of the property and the building's income value."<sup>62</sup>

### **Privatization of residential properties**

"Tenant privatization is the term for a systematic conversion of rental apartments into condominiums for the purpose of sale. The goal is to sell these condominiums to the tenants, who have a legally enforced right of first refusal and an extended protection against the termination of their rental contracts. The right of first refusal provides the tenant with an opportunity to become homeowners by acquiring their apartment, in which they have often lived for many years. Prior to the exercise of this right of first refusal, the tenant is well-advised to conduct a calculation of the actual cost burden that includes all additional costs incurred at acquisition (property transfer tax, land registration, notary), as well as possible maintenance and refurbishment backlogs. If the condominium is not sold to the tenant, it is usually sold to third parties, either as owner-occupied housing (in the case of vacant apartments) or as a capital investment (if the apartment is rented out). "<sup>63</sup>

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<sup>61</sup> Definition of Due Diligence taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 263 (Translation)

<sup>62</sup> Definition of Asset Valuation Method taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 735 (Translation)

<sup>63</sup> Definition of tenant privatization taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 594. (Translation)

**Portfolio Analysis**

"With the aid of portfolio analysis, a company can classify certain business areas in a matrix and can develop appropriate strategies accordingly. First, this requires a schema for defining the strategic businesses. "<sup>64</sup>

**Asset valuation approach**

"In the asset valuation approach, the land value and the value of the building are determined separately, based on the material value of the assets. A market adjustment factor is applied to the material value of the assets in order to arrive at the market value of the assets."<sup>65</sup>

**Conversion**

"Conversion refers to the process by which apartment houses are legally transformed into condominiums, usually with the aim of selling the newly-created units at a higher price than was paid for the entire building. [...] As part of the conversion process, a certificate of closure (*Abgeschlossenheitsbescheinigung*) confirms that the newly created condominiums are physically closed. In the case of a conversion, the tenants living in the object at the time are automatically granted a special protection against termination of lease contracts by law. The Civil Code (*BGB*) grants tenants a three-year blocking period for terminations of contracts. Following this period, the regular regulations concerning the periods of notice apply. However, federal states have the power to extend this blocking period for certain municipalities or their parts to up to ten years via regulations. [...] Conversion into condominiums grants the current tenant a so-called legal right of first refusal (*Vorkaufsrecht*), which the tenant must exercise within a two-month period upon receipt of the notice of sale. In the case of publicly subsidized housing, this right of first refusal following conversion measures is extended to a six-month period within which a tenant may decide to exercise his right. This is not affected by the aforementioned regulations of the Civil Code (*BGB*)."<sup>66</sup>

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<sup>64</sup> Definition of portfolio analysis taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 672. (Translation)

<sup>65</sup> Definition of Discounted Cash Flow Methods taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 256. (Translation)

<sup>66</sup> Definition of apartment conversion taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 834 (Translation)

### **Comparables Method of Valuation**

"There are two variants of property valuation using the comparables method of valuation: a price comparison method and a factor comparison method. The price comparison method draws upon actual sales prices attained for comparable properties. The local expert committees (*Gutachterausschuss*) develop a community reference price. In addition, documents made available to the tax offices following sales of similar properties are also drawn upon. Burdens of the property are not taken into account. Instead of actual comparison sites, comparison factors are used. These comparison factors are established by the local expert committees (*Gutachterausschuss*) for comparable units of reference, such as the number of rooms or surface area of a comparable building. When using only building-related comparison factors, the land value must additionally be taken into account in accordance with § 179 of the valuation act (*Bewertungsgesetz*). In the case of the factor comparison method, the comparable reference value is calculated by multiplication of annual income (or other reference factors) of the property in question with the factor established by the expert committee (*Gutachterausschuss*)."<sup>67</sup>

### **(Current) Market value**

"The market value is determined by the price that would be achieved in the ordinary course of business on the date of the valuation in the event of a sale. Legal issues, [...], actual attributes of the properties [...] and the condition of the building (Example: large backlog of maintenance and repairs) are to be taken into account. Personal and extraordinary issues that may influence market outcomes are not to be taken into account. The latter may include price discounts granted to acquaintances, monopoly prices or price extortions due to the buyer's dependence upon acquiring a specific property. The definition of the market value is codified in § 194 of the German Building Code (*Baugesetzbuch*)."<sup>68</sup>

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<sup>67</sup> Definition of comparables valuation method taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 866 (Translation)

<sup>68</sup> Definition of market value taken from: Sailer, Erwin/Grabener, Henning/Matzen, Ulf: Immobilien-Fachwissen von A-Z, 9. Run, Kiel 2011, P. 870 (Translation)



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