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Fahrländer Partner  
Raumentwicklung

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# IMBAS

BY **FPRE**

Real estate analysis and evaluation  
system for Switzerland



# FPRE

Fahrländer Partner is a privately owned independent research and consultancy company based in Zürich and with branches in Bern and Frankfurt am Main.

Our interdisciplinary team analyses spatial development issues with a focus on economic and socio-demographic trends. Since the company's foundation in 2006, our key activities have been research, the development of products, and customized analyses and studies commissioned by our customers. Real estate is the focus of our work.

To ensure close links with research we participate in scientific congresses, publish papers and give presentations at universities and universities of applied sciences.



## Partners

- Stefan Fahrländer, Dr. rer. oec.  
Economist / Econometrician
- Dominik Matter, lic. oec. publ. UZH  
Economist / Econometrician
- Manuel Lehner, MSc ETH / dipl. Ing. FH  
Urban and Traffic Planner
- Jaron Schlesinger, MA VWL UZH, DAS ETH  
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- Martin Bühler, MSc ETH Arch / Arch. SIA  
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- Raphael Schönbächler, lic. oec. publ. UZH,  
CAS, Economist / Real Estate Consultant
- Rainer Marti, MSc ETH, CAS REF SFI  
Urban and Traffic Planner
- Arno Curschellas, dipl. Bauing. FH, MAS  
REM, Civil Engineer / Real Estate Economist

## Memberships



## Products

- IMBAS
- Meta analysis / Monitor Regulation
- Immobilien-Almanach Schweiz
- Communal check
- Macro-location rating
- Segmentation of demand
- Liveability index (WLQI)
- Prospective model
- Real Estate Scenario Cockpit (RESC)
- Real estate price indices
- Real estate survey
- Retail model
- Micro-location rating
- Location analysis
- Neighbourhood analysis
- Valuation models for private properties
- Quick valuation for real estate agents websites
- Market rent model
- Valuation model for investment properties
- Portfolio analysis
- Project development and valuation
- Comparables and Benchmarks

## Services

### Consultation:

- Location and market analysis
- Real estate strategy
- Statistical studies
- Socio-demographic analysis
- Regional economic analysis
- Competitions and test planning

### Valuation:

- Transaction valuations
- Land and project valuation
- Value-added calculation
- Valuations of private property
- Rent and yield analysis
- Legal opinions
- Specialties

## References

FPRE's customers include public authorities at all levels in Switzerland and international organisations such as the OECD.

Our main client base is the private sector:

- Real estate developers
- Real estate investors
- Real estate valuers and managers
- Banks and insurance companies
- Real estate brokers

# IMBAS

Real estate analysis and evaluation system

IMBAS was created as an optimal solution to the challenges of real estate evaluation. It enables the analysis and rating of properties in a scientific and transparent way. IMBAS is a web application that works with all the common internet browsers. IMBAS allows the user to make a quick first evaluation of all types of property. It also enables more in-depth analyses, including thorough evaluation of untypical properties and special cases. Apart from the Swiss real estate market, IMBAS can be used for real estate in the Principality of Liechtenstein and in Germany. Thanks to the flexibility of the web application and its user-friendly structure, IMBAS can be easily adapted to individual customer requirements.

## Development

The first IMBAS version for Switzerland and the Principality of Liechtenstein was delivered to our customers in 2006. Since then, the web application has been continually expanded and adapted to respond to customer needs and valuation challenges.

We made a major technological leap in 2013 with the separation of IMBAS (front end) and the valuation logic (web services). This enabled us to integrate our web services into various third-party applications.

Security requirements increased with the use of IMBAS by banks and other customers with high security demands. Regular penetration testing ensures that IT infrastructure and data security regulatory requirements are met. FPRE also complies with the IOSCO Principles for Financial Benchmarks. FPRE's hedonic approach to the valuation of real estate is regularly reviewed by external professors.

In 2018 took place the gradual extension of the web application in Germany.

## Impression: IMBAS Cockpit

Search object: Reference no., adress etc.			
MWG Example 1	2563 Ipsach	01.10.2019 18:21	
REN Example 2	8700 Kusunacht	01.10.2019 18:21	
EFH Example 3	54576 Hillesheim	01.10.2019 18:20	
EWG Example 4	4466 Ormalingen	01.10.2019 18:20	
EFH Example 5	8570 Weinfelden	01.10.2019 18:20	

## IOSCO

The International Organization of Securities Commissions publishes the Principles for Financial Benchmarks. FPRE published the IOSCO - Letter of Compliance for the in-house valuation models and price indices for the first time in 2018.



## IMBAS Advisory Board

- Dr. Hans-Michael Brey, Stiftung Berliner Leben, Germany
- Prof. Dr. Roland Füss, University St. Gallen, Switzerland
- Prof. Dr. Pascal Gantenbein, University Basel, Switzerland
- Prof. Dr. Hans Christian Jünger, University Stuttgart, Germany
- Dr. Stephan Kloess, Kloess Real Estate, Altendorf, Switzerland
- Prof. em. Dr. Klaus Neusser, Vienna, Austria

<b>Meta analysis / Monitor regulation</b>	<p>Our meta analyses provide a comprehensive overview of the overall and real estate markets.</p> <ul style="list-style-type: none"> <li>– Meta analysis economy Switzerland</li> <li>– Meta analysis real estate Switzerland</li> <li>– Meta analysis real estate Germany</li> <li>– Overview Real estate economics continuing education</li> </ul> <p>Monitor regulation provides an overview of recent developments in the regulatory environment influencing the real estate sector.</p>
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<b>Communal check</b>	<p>Communal checks (housing / commercial) provide comprehensive, clearly presented information on all areas relevant to the property market at the macro-location level.</p> <p>Topics (selection):</p> <ul style="list-style-type: none"> <li>– Automatically generated macro location texts</li> <li>– Population</li> <li>– Segmentation of demand / Stages in life</li> <li>– Taxes / Income / Purchasing power</li> <li>– Housing market / Vacancies</li> <li>– Workplaces / Employees / Key branches</li> <li>– Floor space requirement</li> <li>– Market rents / Price levels</li> <li>– Long-term prospects for the residential / commercial property market</li> </ul> <p>Frequent application:</p> <ul style="list-style-type: none"> <li>– Analysis of the macro location</li> </ul>
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<b>Macro-location rating</b>	<p>Macro-location ratings condense the amount of data on the individual sites to a single key figure. This simplifies the comparison of one site with all other sites: Current and prospective macro-location rating.</p> <ul style="list-style-type: none"> <li>– Macro-location rating, rental properties</li> <li>– Macro-location rating, offices</li> <li>– Macro-location rating, retail</li> <li>– Macro-location rating, commerce / industry</li> <li>– Macro-location rating, logistics</li> </ul> <p>Frequent applications:</p> <ul style="list-style-type: none"> <li>– Efficient analysis of a location</li> <li>– Portfolio analysis / benchmarking</li> </ul>
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<b>Location analysis</b>	<p>The location analysis provides data and ratings for residential and commercial properties at the macro and micro location levels.</p> <ul style="list-style-type: none"> <li>– Macro- and micro-location text</li> <li>– Market values, market rents, price levels</li> <li>– Macro- and micro-location ratings</li> <li>– Selection of uses by user</li> </ul>
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<b>Neighbourhood analysis</b>	<p>The neighbourhood analysis provides a detailed analysis of indicators relevant to an evaluation.</p> <p>Indicators (selection):</p> <ul style="list-style-type: none"> <li>– Topography</li> <li>– Construction requests / approval</li> <li>– Services</li> <li>– Schools / external childcare</li> <li>– Traffic</li> <li>– Pedestrian Frequency</li> <li>– Noise pollution</li> </ul>
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<b>Micro-location rating</b>	<p>The micro-location rating is based on some 80 indicators presented in a 25x25 meter nationwide grid. For each address in the Swiss settlement area partial and total ratings for the main uses of housing, office and sales can be retrieved.</p> <p>Partial ratings:</p> <ul style="list-style-type: none"> <li>– Exposure to sunlight</li> <li>– View</li> <li>– Image of the district</li> <li>– Services</li> <li>– Leisure / relaxation</li> <li>– Public transport</li> <li>– Road links</li> <li>– Exposure to noise</li> </ul>
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## Valuation models for private properties

Valuation models for privately owned apartments and single family homes involve a structured process of data compilation, evaluation and documentation. The models are based on more than 100'000 comparison data set. The following valuation methods are available:

- Hedonic methods
- Real value methods
- Earning capacity methods

Support is provided throughout the process in the form of submodels and model suggestions:

- Condition calculation / Standard / Micro location / Renovation requirement calculation
- Construction costs calculation
- Model suggestion for land value
- Model suggestions for net rents and gross capitalisation
- Comparables

Comprehensive reporting options are available for all valuation models.

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## Quick valuation

Quick valuation of private properties can be integrated into your website to generate leads:

- Condominium and single-family houses
- Detailed information on the evaluation site in the results page
- Very simple integration into your website as a web widget / iframe
- Responsive design: pc screen, tablet and smartphone
- Flexible color combinations for optimal graphic integration
- Lead package: after each evaluation, an e-mail with contact information and object data is generated
- 4 languages: German, French, Italian, English

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## Market rent model

The following hedonic models are available for estimating market rents:

- Rental apartment (gross, net, add. charges)
- Office space
- Retail space

As with the valuation for private properties, the user follows a structured process and benefits from submodels and model suggestions.

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## Valuation model for investment properties

The valuation model for investment properties uses the discounted cash flow method (DCF). It can be applied to usage groups or used alongside a detailed rental table.

Submodels and model suggestions:

- Condition calculation / Standard / Micro-location
- Hedonic market rents
- Model suggestions for vacant properties
- Benchmarks for running costs
- Model suggestions discounting

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## Return-Comparables

The module return-comparables is used to query gross returns based on transaction data. The user can retrieve gross returns for the following building uses:

- Apartment buildings
- Mixed use
- Office building

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## Project development and evaluation

The IMBAS project development and evaluation module is used to evaluate complex properties. In a guided process, users take the following steps to evaluate a project:

- Building approval benchmarks / Quantity structure
- Targets groups definition
- Utilisation concept / Housing mix
- Income / Revenue and Construction costs
- Residual and project value

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## Portfolio analysis

IMBAS was created for the analysis and valuation of individual properties. The portfolio analysis module now makes it possible to analyse entire real estate portfolios.

The tool allows portfolios to be defined and objects to be assigned to one or more of these. In «Export» (Excel) the following aspects of the portfolio are evaluated and displayed:

- Spatial distribution / Usage distribution
- Location and property rating
- Earnings and cost structure
- Cash flow forecasts

The Excel tool can be extended and adapted to customer requirements.

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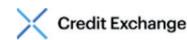
## Scope of services

- IMBAS internet application
- Integration in third-party applications (web services)
- Quarterly updates (data and models)
- Comprehensive model suggestions
- Comprehensive print and documentation options
- Training courses, support, user manuals, quality reports
- Languages: German, French, Italian, English
- Flexible licensing options

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## Technical integration

- All modules can be integrated as web services into any application
- IMBAS: All modules integrated
- Integration in third-party applications (selection):



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## Data sources

- Macro location: Public statistics as well as own data and models
- Private properties: Well-described transaction data primarily from banks and insurance companies (inter alia on the basis of SRED)
- DCF: Model suggestions for income, vacancies, running costs, discounting (inter alia on the basis of REIDA)
- Market rents: Well-described closing rents primarily from institutional owners and property managers (inter alia on the basis of REIDA)

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## Literature

- FPRE (quarterly)  
IMBAS for private properties: Quality report.
- FPRE (quarterly)  
IMBAS for rental apartments: Quality report.
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- Fahrländer, S. (2008), Indirect Construction of Hedonic Price Indexes for Private Properties, in: Swiss Journal of Economics and Statistics, Vol. 2008 (4), p. 607–630.
- Fahrländer, S. (2007), Hedonische Immobilienbewertung: Eine empirische Untersuchung der Schweizer Märkte für Wohneigentum 1985 bis 2005. Forum Wirtschaft, Martin Maidenbauer Verlag, München.
- Fahrländer, S. (2006), Semiparametric Construction of Spatial Generalized Hedonic Models for Private Properties, in: Swiss Journal of Economics and Statistics, Vol. 2006 (4), p. 501-528.

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## IMBAS Training

Training courses for beginners and advanced users are offered regularly throughout Switzerland. Further information can be found under the following link:

[en.fpre.ch/forschung-lehre/imbас-schulungen/](http://en.fpre.ch/forschung-lehre/imbас-schulungen/)

or



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PropTech Label



Team

