### **1. Standard of Living (Poziom życia)**

**Definition:** Standard of living refers to the **overall quality of life** and **economic well-being** of individuals or households. It is usually measured by factors such as **income**, **housing affordability**, **access to goods and services**, and **purchasing power**.

**Relevance to your project:**

* In your hypothesis, you're analyzing whether **increasing housing prices (HPI)** **positively or negatively** affect people’s **standard of living**.
* **High HPI** → can reduce affordability since a larger portion of income goes to housing → **lower standard of living**.
* **Moderate HPI growth** → can indicate economic growth and stability → potentially **higher standard of living**.

**Example for your analysis:** If in a given EU country house prices rise faster than **income growth**, affordability decreases, lowering the standard of living.  
 But if incomes rise along with prices, the effect can be neutral or even positive.

### **2. Investment Opportunities (Możliwości inwestycyjne)**

**Definition:** Investment opportunities relate to the potential for **profit** when purchasing real estate or investing in the **housing market**.

**Relevance to your project:**

* While rising housing prices **hurt affordability**, they can **signal profitability** for investors.
* For example, in countries where HPI consistently grows, investing in property can be a **strategic financial decision**.
* Your project explores whether **high HPI** implies **good investment potential** despite potential affordability challenges.

**Example for your analysis:** If house prices in Spain have grown steadily by **10% annually** over the last five years, it indicates that buying a property there could yield significant returns.  
 At the same time, young families might struggle to afford housing — showing the **trade-off** between **affordability** and **investment potential**.

### **3. How it connects to your project**

Your **project objective** is to **analyze the relationship between housing prices, inflation, and income growth** in the EU.

* **Standard of living** shows **how rising HPI affects people’s everyday lives**.
* **Investment opportunities** show **whether rising HPI can be interpreted positively** as a **profitable trend** rather than just a burden.

GRAPHS

## **Updated Presentation Script — Focusing on Investment Opportunities**

### **Intro**

*"On this slide, we present the main results of our analysis of the EU housing market.  
 Using data on housing prices, inflation, and income growth, we explored how these factors interact and how they help us* ***identify potential investment opportunities****."*

### **Graph 1 — Average of House Price Index by Year and Country (top-left)**

*"This graph shows the* ***average housing price index in Poland*** *over time.  
 We can see a* ***strong upward trend****, especially after 2017.  
 For investors, this signals a* ***market with continuously rising property values****, which may lead to* ***profitable long-term returns****.  
 However, it also suggests that* ***entering the market earlier*** *could be more beneficial."*

**Investment takeaway:**

Continuous price growth = **strong potential for long-term property investment**, but **timing matters**.

### **Graph 2 — Comparison of House Price Growth vs Income Growth in Poland (bottom-left)**

*"Here we compare* ***housing price growth*** *(bars) with* ***income growth*** *(line).  
 Since housing prices* ***grow faster than incomes*** *in most years, we see* ***increasing demand pressures*** *on the market.  
 For investors, this imbalance often* ***drives higher rental yields****, because fewer people can afford to buy and instead* ***turn to renting****."*

**Investment takeaway:**

Rising prices + slower income growth = **strong rental market opportunities**.

### **Graph 3 — Inflation & House Prices by Income and Location (top-right)**

*"This scatter plot compares* ***inflation rates*** *with* ***average housing price indices*** *across EU regions.  
 Regions where* ***inflation and housing prices are both high*** *— for example, parts of Eastern Europe — represent* ***fast-growing markets****.  
 For investors, this means* ***high short-term gains are possible****, but there is also* ***greater risk*** *due to inflation volatility.  
 On the other hand, regions with* ***stable inflation*** *but* ***steadily growing prices*** *— like some parts of Western Europe — are* ***safer long-term investments****."*

**Investment takeaway:**

High inflation + high price growth = **high-return, high-risk markets**.  
 Stable inflation + steady growth = **safe, long-term investment zones**.

### **Graph 4 — Forecast of House Price Index by Year (bottom-right)**

*"Finally, the forecast shows the* ***expected trajectory of housing prices*** *up to 2030.  
 Prices are projected to* ***keep increasing****, meaning today’s investments are* ***likely to appreciate*** *in the coming years.  
 This makes it easier for investors to* ***plan strategies*** *based on projected market conditions."*

**Investment takeaway:**

Forecasted continuous growth = **long-term value appreciation** and **profitable property holding strategies**.

### **Connecting It All**

\*"When we combine these insights, we see a complete picture for investors:

* Housing prices are **consistently rising**, suggesting **capital growth opportunities**.
* Income growth **lags behind**, creating **rental investment potential**.
* Inflation drives **regional investment strategies** — distinguishing **high-growth risky markets** from **stable, safer ones**.
* And forecasts confirm that **housing demand will remain strong** for years to come."\*

Do you want me to prepare a **one-minute concise investment-focused speech** that summarizes **all four graphs together**?  
 It would make your delivery **clearer and more confident** during the presentation.  
 Should I?

—-

## **Suggested Presentation Script**

### **Intro**

*"On this slide, we present the main results of our analysis of the EU housing market.  
 Using three datasets — housing price index, earnings, and inflation — we explored how these factors are connected and how they relate to our hypotheses."*

### **Graph 1 — Average of House Price Index by Year and Country (top-left)**

*"Here we see the* ***average housing price index in Poland*** *over time.  
 From 2011 to 2021, we notice a* ***steady increase*** *in the index, with a* ***strong acceleration after 2017****.  
 This means that housing prices have been* ***rising consistently****, which directly supports our hypothesis that* ***house prices increase faster than income****."*

### **Graph 2 — Comparison of House Price Growth vs Income Growth in Poland (bottom-left)**

*"This graph compares* ***house price growth*** *with* ***income growth*** *in Poland.  
 The* ***bars*** *represent the growth in the housing price index, while the* ***line*** *shows income growth.  
 We can see that in* ***most years****, housing prices* ***grew much faster than incomes****, reducing* ***housing affordability****.  
 This directly supports our second hypothesis — that* ***rising housing prices limit people’s ability to buy homes****."*

### **Graph 3 — Inflation & House Prices by Income and Location (top-right)**

*"This scatter plot compares* ***inflation rates*** *with the* ***average housing price index*** *across EU regions.  
 For example, in Eastern Europe, countries with* ***higher inflation*** *also tend to have* ***higher housing prices****.  
 This helps us* ***identify potential investment opportunities*** *— as our hypothesis suggested, regions with rapidly increasing prices may attract more investor interest."*

### **Graph 4 — Forecast of House Price Index by Year (bottom-right)**

*"Finally, this forecast shows the* ***expected trend of the housing price index*** *until 2030.  
 The model predicts a* ***continued growth*** *in housing prices, meaning this upward trend is likely to* ***persist in the coming years****.  
 This insight connects to our goal of* ***anticipating future risks and opportunities*** *in the housing market."*

### **Connecting It All**

\*"When we combine these graphs, we see the **full picture**:

* Housing prices are **consistently rising**.
* Incomes **aren’t catching up**, which reduces affordability.
* Inflation is an **additional driver** of rising prices, especially in some regions.
* And forecasts indicate this trend is **not slowing down**.

All of this ties back to our hypotheses:

* Housing prices and inflation are **growing faster than income**.
* **Affordability decreases**.
* There are potential **investment opportunities** in regions where prices are rising quickly."\*

### **Closing the Slide**

*"So, these insights confirm our hypotheses and give us a better understanding of how the housing market evolves across the EU."*

Do you want me to also prepare a **visually guided speaking script** — where I’ll show **exactly what to point at** on each graph while explaining?  
 That usually makes live presentations much smoother.

# **Presentation Script – Analysis of EU Housing Market**

## **Intro**

\*"In this part of our presentation, we analyze the relationship between the **Housing Price Index**, **inflation**, and **income growth** in the EU.  
 Our main goal is to understand how these factors influence **living standards** and **investment opportunities**.

We formulated three key hypotheses:

1. Housing prices and inflation **increase faster than income**.
2. **Housing affordability decreases** as a result.
3. Rising housing prices **create potential investment opportunities**.

Using our datasets, we explored these aspects through four main visualizations, which together provide a comprehensive view of the EU housing market."\*

## **Graph 1 — Average of House Price Index by Year and Country *(Top-left)***

\*"This graph shows the **average housing price index in Poland** between 2011 and 2021.  
 We observe a **steady upward trend** in prices, with a **significant acceleration after 2017**.  
 This confirms the **first part of our hypothesis**: housing prices **increase faster than income**, especially in recent years.

From the **project’s goal perspective**, this visualization helps us **understand** how prices evolve over time, providing insights into **affordability** and **standard of living**. As housing prices rise faster than salaries, people face **greater financial pressure** when buying property, which affects **economic well-being**.

From an **investment perspective**, the continuous growth signals **strong potential returns** for long-term property owners.  
 For investors, this creates **two key strategies**:

* **Early entry**: buying property before prices rise further maximizes **capital gains**.
* **Rental market positioning**: as property ownership becomes less affordable, **demand for renting increases**, potentially improving **rental yields**.

This chart also highlights a risk: if prices continue to rise without matching income growth, there’s a possibility of **housing market overheating**.  
 However, this very imbalance can attract investors who seek **short- and long-term profit opportunities** in growing markets like Poland."\*

## **Graph 2 — Comparison of House Price Growth vs Income Growth in Poland *(Bottom-left)***

\*"This graph compares the **annual growth rate of housing prices** (bars) with **income growth** (line) in Poland.  
 It clearly demonstrates that **housing prices have consistently grown faster than wages**, particularly after 2016.

This strongly supports our **first and second hypotheses**:

* Prices rise **much faster than incomes**.
* As a result, **housing affordability is reduced**.

From the perspective of our **project objectives**, this visualization helps us **evaluate** the **gap between income and housing costs**, which directly impacts **living standards**.  
 When incomes fail to keep pace with property prices, households **spend a larger share of earnings** on housing, reducing their ability to save or invest in other areas.

For **investment opportunities**, this trend offers two critical insights:

1. **Rental market growth** → If fewer people can afford to buy property, **demand for rentals increases**, creating **stable income streams** for property investors.
2. **Capital appreciation** → The consistent gap between income and property values suggests that prices are **likely to remain elevated** in the future, meaning investors can **benefit from long-term property appreciation**.

However, it also signals the need for **careful market timing**.  
 If the gap becomes **too large**, it could eventually lead to **reduced demand** and potential **price corrections**.  
 Investors should balance the **high returns** available in fast-growing housing markets with the potential **risk of affordability crises**."\*

## **Graph 3 — Inflation & House Prices by Income and Location *(Top-right)***

\*"This scatter plot explores the relationship between **inflation rates** and the **housing price index** across different EU regions.

From this visualization, we can identify **regional market patterns**:

* **Eastern Europe**: countries with **high inflation** often also have **high housing price growth**.
* **Western Europe**: lower inflation combined with **steady price increases** creates **stable markets**.
* **Southern Europe**: mixed behavior, with some countries showing **moderate inflation** but **sharp housing price spikes**.

This directly connects to our **third hypothesis** about **investment opportunities**.  
 Regions with **high inflation and high price growth** are **high-return but high-risk markets**. Investors may gain **quick profits**, but these markets are more **volatile**.  
 In contrast, regions with **stable inflation and gradual price growth** are **safer for long-term investments**, offering **predictable returns**.

From the **project goal perspective**, this graph allows us to **identify** where rising housing prices are driven by **economic fundamentals** and where they are influenced by **inflationary pressures**.  
 This distinction is crucial for **forecasting risks** and **guiding investor strategies**.

For example:

* **Poland and other Eastern EU countries** represent **fast-growing housing markets** with strong short-term profit potential.
* **Germany, France, and other Western EU countries** offer **lower but steadier returns**, making them **ideal for long-term investment portfolios**.

By segmenting opportunities by **region**, this chart links our data directly to **practical investment insights**."\*

## **Graph 4 — Forecast of House Price Index by Year *(Bottom-right)***

\*"This forecast projects the **housing price index** up to 2030.  
 The model predicts a **continued increase in housing prices**, showing that the upward trend observed in the past decade is likely to **persist**.

This finding supports our **first hypothesis** — that housing prices are **rising faster than incomes** — and also strengthens our **investment-related hypothesis**.

From the perspective of our **project objectives**, this graph helps us **forecast future market conditions**.  
 By anticipating continued growth, we can **assess risks and opportunities** in different regions and prepare investment strategies accordingly.

For **investors**, this chart provides **actionable insights**:

* Buying **now** positions investors to **benefit from long-term property appreciation**.
* Regions with the **steepest projected growth** may yield the **highest capital gains**, but also come with **greater affordability challenges**.
* In stable regions, investors can use forecasts to **secure predictable returns** with **lower volatility**.

This projection is also valuable for **policy makers and analysts**, as it suggests that **housing affordability issues may worsen** unless income growth accelerates or inflation slows down.  
 For investors, though, it confirms that **property markets across the EU remain an attractive asset class** for both **capital appreciation** and **rental income generation**."\*

## **Conclusion**

\*"Bringing all four graphs together, we can clearly see how our findings align with the **goals, objectives, and hypotheses** of this project:

* Housing prices are **increasing rapidly**, often outpacing income growth.
* **Affordability is decreasing**, especially in fast-growing regions.
* Inflation plays a **key role** in shaping regional market behavior.
* These dynamics create **distinct investment opportunities**, from **high-growth, high-risk markets** in Eastern Europe to **stable, long-term markets** in Western Europe.

Overall, our analysis provides **actionable insights** for investors and policymakers, highlighting **both opportunities and risks** in the evolving EU housing market."\*

Do you want me to also prepare a **separate one-minute investor-focused summary** that condenses all this into **a powerful, concise explanation**? It would be perfect for the end of your presentation. Should I?