Soutenance Stage d'Application

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Maître de stage: Françoise Huang
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Allianz Trade - ENSAE

Outline

Economic Research department

- Équipe répartie entre Paris et Munich (24 personnes)
  - Paris: recherche économique et recherche sectorielle
  - + 2-4 stagiaires
  - Durée: 6 mois
- Maxime Darmet - Économiste France et US
  - Projet: épargne excédentaire des ménages (EU & US)
- Roberta Fortes - Économiste LATAM & Espagne
  - Projet: évolution récente des salaires en Europe

Figure: Équipe de parsienne

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Principaux objectifs

Intérêt du projet :

- Impact de la pandémie sur l'épargne des ménages en Europe et US ?
- Accumulation d'une épargne "excédentaire" ?
- Suivi et principaux moteurs de cette épargne ?
- Quelles différences entre pays ? Europe vs US ?

Définition et calcul de l'épargne excédentaire

Première définition donnée par le Bureau of Economic Analysis

$$\begin{aligned} & \text{Flow of savings} = \text{DPI} - \text{PCE}\ (-\textit{other outlays}) \\ \hookrightarrow \quad & \text{Flow of } \textit{excess} \text{ savings} = \Delta\text{DPI} - \Delta\text{PCE}\ (-\Delta\textit{other outlays}) \end{aligned}$$

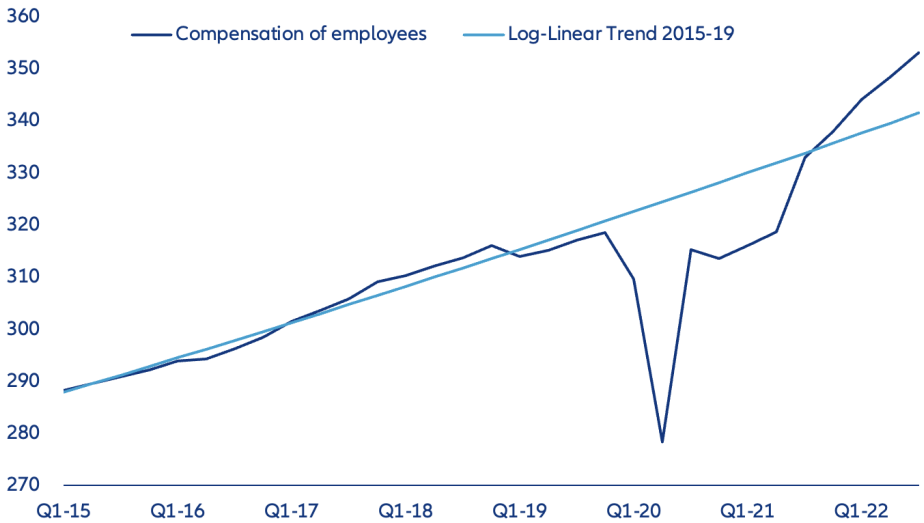
Où: ΔX est l'écart relativement à la tendance pré-pandémique 2015-19 (log-linéaire)

Pour les pays européens, on approche la définition de l'OCDE du revenu disponible (DPI) par la définition de la Fed:

$$\text{DPI} \cong \text{Compensation of E} + \text{Net property income} + \text{transfers} - \text{taxes}$$

- Intérêt: flux par composante du revenu disponible

Calcul de l'épargne excédentaire - exemple d'une composante



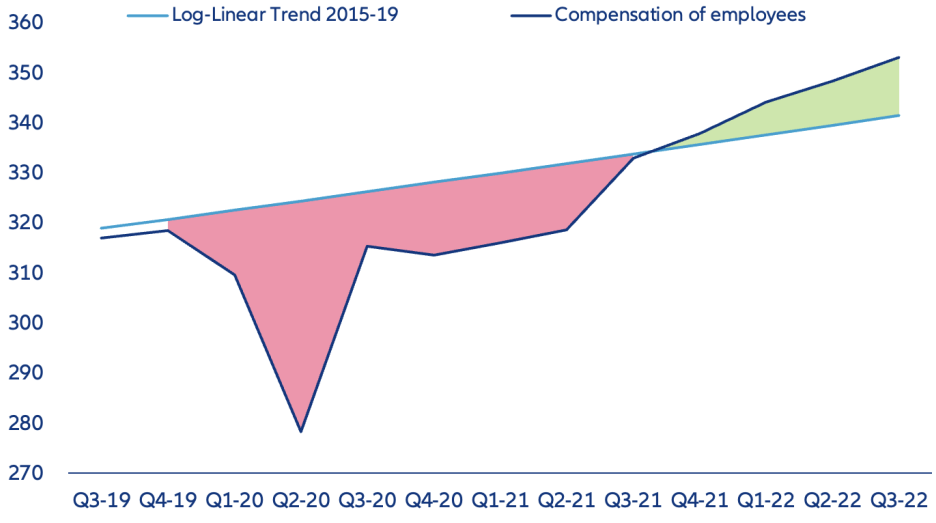


Figure: Exemple - flux pour la variable 'compensation of employees': écart relatif à la tendance pré-pandémique (En rouge contribution $\Delta Comp \leq 0$, en vert $\Delta Comp \geq 0$)

Décomposition de l'épargne excédentaire par composante - France

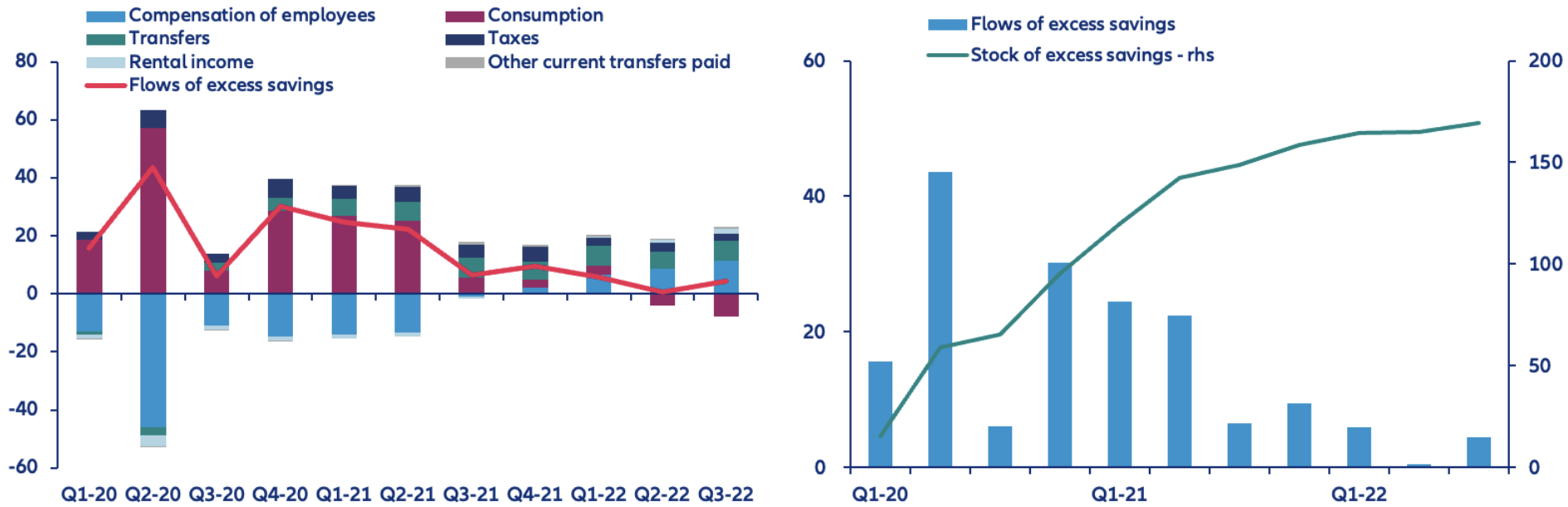


Figure: LHS: Flux d'épargne par composante - RHS: accumulation (stock)

Résultat hors stage[1]: Décomposition inflation France

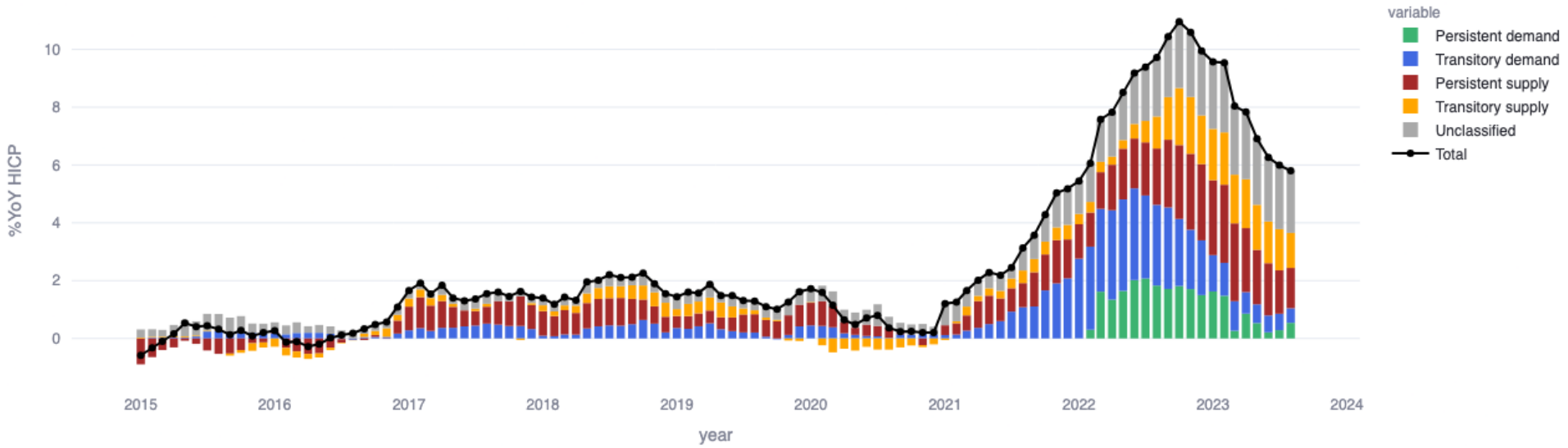


Figure: Décomposition de l'inflation en composantes offre-demande

[1] Projet de 3A pour le cours Advanced time series de Mr. RICCO Giovanni

Répartition de l'épargne excédentaire par quintile

En date du T3 2022

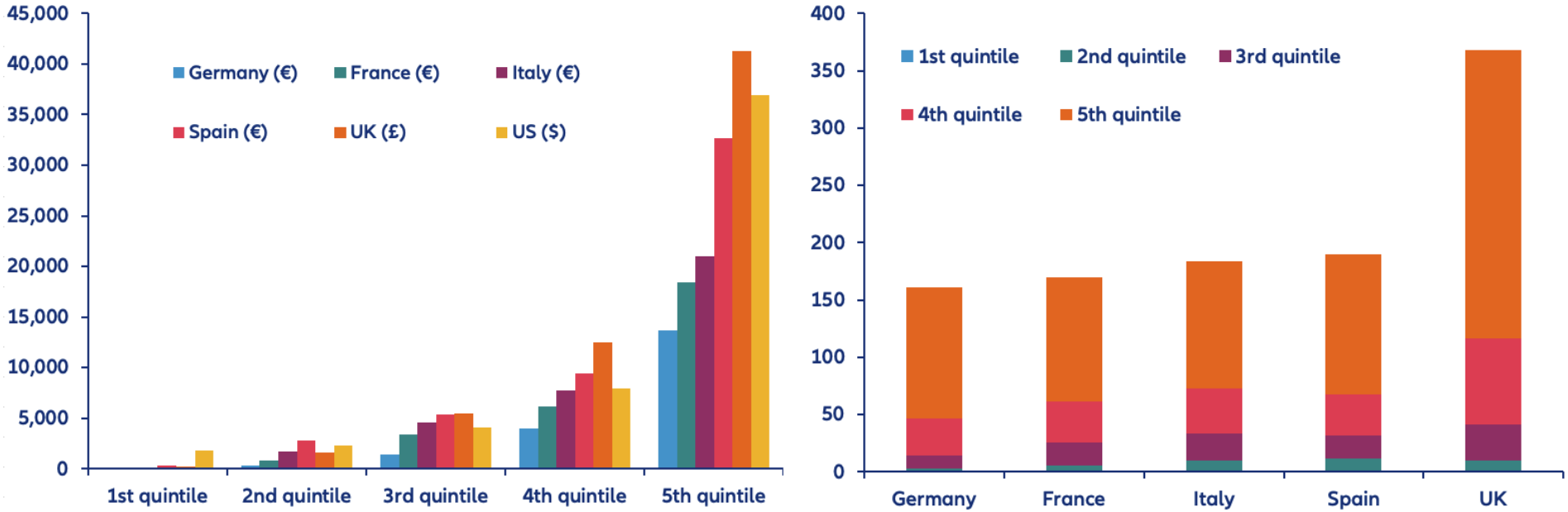


Figure: LHS: Stock par ménage - RHS: Aggrégat national

L'essentiel

Principaux résultats (au T3 2022) :

- Stock d'épargne excédentaire relativement important : pas de baisse observée
- Vital de prendre en compte la répartion de ce stock entre les ménages

Retrospectivement :

- Décomposer PCE en bien et services
- Ajouter d'autres économies

Enseignements :

- Bases sur des grands aggrégats des comptes nationaux
- Importance des estimations d'épargne pour les ménages dans les débats
- Difficulté d'obtenir de telles estimations

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Principaux objectifs

Intérêt du projet :

- Variables altenatives de "sous-emploi" (slack) dans la courbe de Phillips ?
- Quelle situation en Europe ? (France/Allemagne/Espagne/Italie)
- Intérêt fort porté sur inflation - croissance des salaires : quelles évolutions ?

Version dynamique de la courbe de Phillips

Forme générale de la courbe de Phillips estimée [*ARDL*]:

$$\Delta wage_t = c + \phi_1(L).\Delta wage_t + \phi_2(L).\Delta CPI_t + \phi_4(L).\Delta slack_t + \phi_3(L).\Delta prod_t + \theta^T.\gamma + \epsilon_t$$

avec:

- L l'opérateur retard
- Partie autoregressive: $\phi_1(L) = \sum_{k=1}^{\mathbf{W}} \alpha_k L^k$
- Variables explicatives - polynômes autorégressifs
  - $\phi_2(L) = \sum_{k=0}^{\mathbf{Q}} \beta_k^{(CPI)} L^k$
  - $\phi_3(L) = \sum_{k=0}^{\mathbf{S}} \beta_k^{(slack)} L^k$
  - $\phi_4(L) = \sum_{k=0}^{\mathbf{P}} \beta_k^{(prod)} L^k$
- γ un vecteur de variables binaires (Covid,GFC)
- ϵ_t terme d'erreur

Méthode de sélection

On définit au maximum : $W \in [1,6]$ et $\{Q,S,P\} \in [0,6]^3$ dans [*ARDL*]

- Méthode de sélection implémentée :

1. Régressions avec l'ensemble des combinaisons $\{W,Q,S,P\}$ possibles
2. Garde les modèles où l'ordre maximum pour chaque variable vérifie $p < 10\%$
3. Choix du modèle qui minimise le critère AIC

→ Meilleur modèle "statistique"

- On ajoute une étape entre 2. et 3. :

2* Restriction de signe sur le LRM pour les variables inflation et productivité :

$$\text{LRM(CPI)} = \frac{\mathrm{d}E(\Delta wage)}{\mathrm{d}E(\Delta CPI)} \geq 0 \quad \& \quad \text{LRM(CPI)} = \frac{\mathrm{d}E(\Delta wage)}{\mathrm{d}E(\Delta prod)} \geq 0$$

→ Trade-off performance et interprétabilité

Performance des différentes mesures de slack

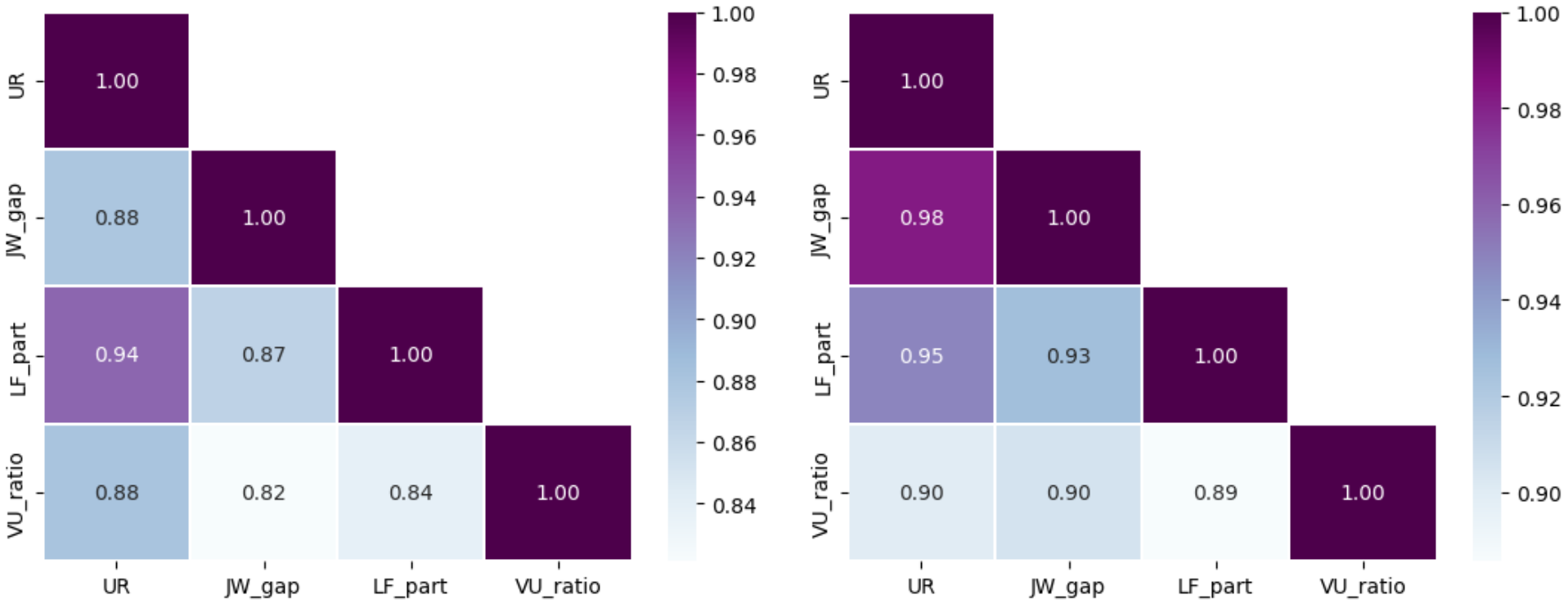

Figure: Cross-correlations (LHS: France, RHS: Allemagne)

Pays core vs périphériques

L'essentiel

Principaux résultats :

- X
- X

Retrospectivement :

- jsp
-

Enseignements :

- jsp
-

Publications

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What to watch:

- **ECB day** — not done yet
- **Eurozone** — a recession avoidance syndrome
- **India** — budget announcement in the midst of a financial crisis

In focus –Americans to fall off the pandemic savings cliff after the summer break, while Europeans hoard even more

- Households' pandemic savings are still large in both Europe and the US. These excess savings relative to consumption are largest in the UK and Spain at around 20-25%. In the US and Germany, however, they stand at less than 8%.
- The US stock of excess savings has been depleting fast with the reopening and the inflation surge: these savings could be fully depleted after the summer this year.
- In Europe, excess savings have not been spent as much as in the US, mostly because of the uneven distribution (the bottom 40% of households has virtually no excess savings while the top 20% has some form of extra savings between EUR14,000 in Germany and EUR33,000 in Spain) but also because they are mostly held in illiquid assets such as real estate.
- Recession fears, sticky high prices, and rising interest rates – as well as social protection reforms – mean that savings intentions are elevated in Europe, and even rising in Germany. Consumer spending will be the weak link in 2023.

Executive Summary

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- **The crisis-related damage to labor markets has not been as bad as expected amid changing consumer preferences and spending behavior.** Employment has increased by 2.3% relative to pre-crisis levels, especially in France and Spain. However, the slow reallocation of labor in the Eurozone has resulted in sluggish productivity growth amid record low unemployment (6.6% in January 2023) as labor markets adjusted via reduced working hours rather than layoffs. Limited productivity gains will hamper a more meaningful recovery, especially in countries and regions with limited labor-market flexibility and a shrinking workforce.

- **The decline in productivity varies significantly across countries due to differences in labor supply and corporate hiring practices.** Italy has seen remarkable productivity growth due to labor scarcity, while other Eurozone economies lag behind. In France and Spain, labor participation and/or job creation have increased sharply, discouraging companies from increasing the efficiency of production and investment. Since companies are increasingly aware that labor is becoming a limiting factor amid deteriorating demographic trends, "labor-hoarding" has also weighed on productivity.

- **Labor scarcity and high inflation has resulted in sustained wage pressures. Wages have also evolved differently across countries, reflecting structural differences of bargaining and collective agreements.** Wage pressures have been somewhat higher in Germany, where rising labor market participation has not helped ease scarcity of workers in several sectors, including construction. Across the largest Eurozone economies, we expect wages to increase by 4-5% this year, followed by 3.5-4.0% next year. While well-anchored inflation expectations suggest that the risk of an adverse price-wage spiral remains small, it cannot be ruled out.

- **Labor-market policies will need to operate in an environment of exceptional uncertainty shaped by both cyclical pressures and secular challenges.** To address the cyclical pressures, policies need to be aimed at adjusting crisis-support measures to encourage a more flexible labor market while protecting the vulnerable. At the same time, structural pressures due to automation and digitalization are becoming more prominent. Active labor market policies should facilitate job-to-job transitions through higher labor and product-market efficiency as well as re-/upskilling, supported by continuous learning programs and changing hiring practices by firms. This could also require public support to incentivize hiring/mobility, ideally in combination with a re-thinking of social protection, including for 'gig' workers and to those who lose their jobs or need transition assistance, and educational reforms that help build skills for the workforce of the future.

Figure: Extraits des publications présentées (LHS: savings, RHS: wage)

Merci!

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