



Focusing on key success factors of PropTechs

Swiss PropTech Report 2021 | June 2021



Swiss PropTech Report 2021 Stress test passed From the 2021 survey **Portrait of three PropTechs**

Imprint

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We would like to thank Jlljana Heussi and Michael Wicki for developing the fundamentals of success factors as part of their MAS Master's thesis "Erfolgsfaktoren von PropTech-Unternehmen".

Dear readers,

If we are looking for positives from the pandemic, then the acceleration of the digital transformation in the real estate sector is certainly one of them.

To deal with this profound change, we need PropTech companies. Without their technical skills, innovative spirit and drive, such endeavors would hardly be possible. We are pleased to see how the PropTech sector is developing from year to year. The coronavirus crisis has brought some additional challenges to the sector, but has not been able to slow it down in any way.

With this fourth issue of the Swiss PropTech Report, we hope once again to improve the understanding of the PropTech sector, because it is the many different cooperations between PropTechs and the real estate sector that are really moving the real estate industry forward. But we also want to give the PropTech sector the visibility it deserves.

What distinguishes the successful PropTechs from the less successful ones? Luck? Yes, certainly. But what else? We explore this question in depth in this issue of the Swiss PropTech Report. A question that is not only highly relevant for the investors, partners and customers of the PropTechs, but also for the PropTechs themselves.

We hope you enjoy reading this study.

Raymond Rüttimann Head Global Real Estate Credit Suisse Asset Management

1.4.5

Gerald Kremer Chief Digital Officer Global Real Estate Credit Suisse Asset Management

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Stress test passed

	2020 was a challenging year for PropTech companies. However, the sector has come through the challenge, has grown strongly in the past year and should ultimately reap significant benefits from the real estate sector's shift towards digital solutions. Never- theless, not all PropTechs will manage to hold their own in the market. We shall there- fore look at the success factors of PropTechs, which are not only of interest to the indi- vidual players, but also to their investors, employees and customers.
First test for PropTechs	Last year, the PropTech sector – like other sectors – was overtaken by the coronavirus crisis and some questions were raised. However, unlike other sectors, COVID-19 was the first test for the young PropTech sector. Many real estate companies were severely challenged by the pandemic and put innovation projects on hold. Accordingly, many PropTechs had to fight hard to continue their projects. In addition, investors' willingness to take risks fell sharply. With this year's PropTech survey, we want to clarify, amongst other things, how well the PropTechs have emerged from the pandemic and where COVID-19 may have left its mark.
PropTech Survey 2021	The online survey was sent in May 2021 to 284 PropTechs with business activities in Switzerland. Sixty-two PropTechs from all PropTech categories took part in the survey, which corresponds to a response rate of 22%. Depending on the structure of the survey participants, the results of our survey may diverge from year to year, as the samples are not identical. Nevertheless, the results give valuable information on trends, which is why we sometimes compare current values with previous surveys.
COVID-19 caused a short-term collapse in confidence	Temporarily, the sector held its breath around the world: The global PropTech Confidence Index, compiled by venture capital firm MetaProp, plummeted in the middle of last year, both in the estimation of PropTech CEOs and in the eyes of investors (Fig. 1). However, the consternation was short-lived. The confidence index recovered very quickly and by the end of 2020 had risen to a level never seen since measurements began. COVID-19 should ultimately prove to be a blessing rather than a curse for the sector. This is because the coronavirus crisis not only significantly accelerated the digital transformation in the real estate sector, but also clearly demonstrated the benefits of digitalization for the wider public. While companies that had already gone digital were able to continue many operations during the lockdown, latecomers often found themselves hampered. That is why many real estate companies have significantly changed their attitude towards digital technologies and set a new course accordingly. As a result of COVID-19, digital connectivity is now perceived in many places as a "must have" rather than a "nice to have".

Fig. 1: Global PropTech sentiment better than ever

Global PropTech Confidence Index; values above 5 signal confidence

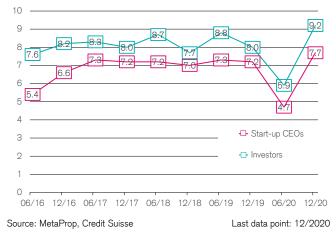
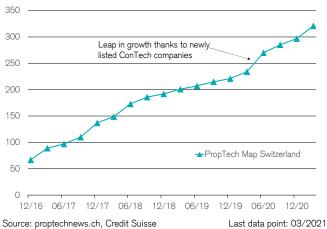


Fig. 2: PropTech sector continues to grow unfazed

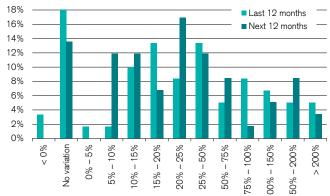
Number of PropTechs according to the PropTech Map Switzerland



Setback in invest- ment volumes in 2020	The temporarily depressed mood was also reflected last year in the volume of venture capital invested globally in PropTech start-ups: According to the Center for Real Estate Technology & Innovation (CRETI), it fell to USD 23.8 billion, a decline of 24.7%. Investments tended to focus more on larger deals and later entry points. This was to be expected due to the uncertainty and the resulting slightly reduced risk appetite, and ultimately also roughly corresponds to the global decline in investment activity ¹ in the real estate sector.
Otherwise little trace of COVID-19	The coronavirus crisis left far fewer traces on other indicators. The number of PropTechs operat- ing in Switzerland, for example, continues to grow strongly, albeit not quite as rapidly as it did until around mid-2018 (Fig. 2). PropTech Map Switzerland, compiled by Heinz M. Schwyter, now counts over 320 entries. This means that Switzerland has an exceptionally high density of Prop- Techs by international standards. Germany, a much larger country, counted only slightly more companies at the end of 2020 ² (330 PropTechs), although German PropTechs weigh significantly more on average.
Undimmed optimism	Few traces of the crisis can be found in the PropTechs' financials either. Despite the pandemic, almost 80% of the PropTechs further increased their headcount in the last twelve months, by an average of 71% (Fig. 3). 18% of the PropTechs surveyed saw no change, and only 3.3% reported a decline in the workforce. Although this decline was significant at 15% to 20% or 25% to 50%, it only affected a small minority. The pandemic did not affect optimism in the sector either: 87% expect further staff increases in the next twelve months, in some cases even more than doubling the workforce.
Strong revenue growth expected	The setbacks in revenue figures are also clear. A small minority of PropTechs (9.6%) suffered a decline in revenue last year (Fig. 4). A further 11.5% recorded no growth or only slight growth of up to 5.0%. In contrast, just under 80% generated considerable growth of over 5.0% – even during the crisis. Overall, PropTechs achieved average revenue growth of 68% in 2020. This means that the Swiss PropTech sector, as well as the real estate industry as a whole, came through the crisis relatively unscathed. The PropTechs also expect a bright future. In 2021, 3.4% still expect a decline in revenue, but overall the sector aims to double its revenue figures. Higher revenue growth than in 2020 is also expected for 2022 and 2023. Other sectors can only dream of such figures.
Increased receptive- ness for PropTech solutions	The real estate sector's interest in PropTech solutions rose following the outbreak of the corona- virus pandemic, and this trend has continued in the current year. Although around 18% of Prop- Techs find the real estate sector not very receptive or not at all receptive to pioneering technology solutions, the number of PropTechs that perceive the real estate sector as very receptive has nev- ertheless grown from 11% to 20%. PropTechs from the asset management, marketplace/plat- form and smart building/IoT sectors in particular expressed a high level of interest in their solu- tions.

Fig. 3: Employment trends at PropTechs

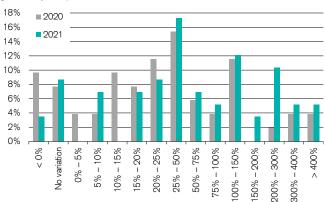
"How has the number of employees changed in the past 12 months, and how do you estimate it will change in the next 12 months?"



Source: Credit Suisse PropTech survey 2021 (N = 61 [last 12M], N = 60 [next 12M])

Fig. 4: Revenue growth at PropTechs

"How has annual revenue changed in 2020 compared to 2019, and what revenue growth do you expect in 2021?"



Source: Credit Suisse PropTech survey 2021 (revenue 2020, 2021: N = 61)

¹ JLL, Global real estate perspective, February 10, 2021

² www.gewerbe-quadrat.de

Success factors of PropTechs

What are the factors that define success? As already stated, Switzerland has an exceptionally high density of PropTechs. Moreover, new PropTechs with similar or even identical business ideas are constantly entering the market. Not all of them will be able to position themselves successfully. This raises the question of what factors are key to the business success of PropTechs. An answer to this question is not only of interest to investors, who risk their equity capital, or customers, who provide time and money for strategically important projects, but also to the PropTechs themselves, who invest heart and soul and capital and are interested in making the right decisions. Profit is less of a yardstick for success than it is for established companies, since many PropTechs have not yet reached break-even. In many cases, they favor growth over the pursuit of profit, seeking to establish themselves as one of the leading players in their segment ahead of the competition and to secure market share.

Non-transparent PropTech sector Authors Jlljana Heussi and Michael Wicki investigated the question of success factors as part of a Master's thesis³ commissioned by Credit Suisse. However, due to the lack of key company figures on the PropTech sector, this question cannot be answered empirically. Hardly any Swiss PropTechs are listed on the stock exchange, which would require them to give an account of their business activities. The authors therefore decided to conduct a qualitative survey among various experts. The experts were recruited from among the PropTechs themselves and their most important stakeholders – customers, investors and consultants. Starting from a long list of 15 success factors, compiled based on secondary research and findings from other industries, the authors identified the key factors for success. The surveys were limited to Switzerland – on the assumption that the global PropTech sector is not significantly different to PropTech companies in Switzerland in terms of success factors.

Success has many factors The expert interviews firstly confirmed that the 15 factors obtained from the secondary research represented a very complete list. Only one additional factor was obtained from the interviews. Secondly, the survey confirmed the success of PropTech companies is not determined by a single factor, but rather by an interplay of all factors identified as significant. For PropTechs, this means that they should place a special focus on the most important factors, but without disregarding the others.

Top 3 success factors The research conducted as part of the Master's thesis came to a fairly consistent conclusion regarding the top three success factors. We refer to these as first order success factors. These are customer benefit, a strong team and scalability. These three factors were mentioned by all four stakeholder groups in the qualitative, open-ended survey of PropTechs, investors, customers and consultants (Fig. 5). In the quantitative survey, where the experts had to weight the 15 factors from the secondary research with points, these three factors were also top-rated (Fig. 6).

Fig.5: Success factors from qualitative survey

Open-ended survey of PropTechs (9), customers (5), investors (2) and consultants (2)

Dorivation	Named by				
		Customers	Investors	Consultants	
deductive	х	х	х	х	
deductive	х	х	х		
deductive	х	х			
deductive	х	х	х	х	
deductive	х	х	х	х	
deductive	х	х			
deductive	х	х		х	
deductive	х	х	х		
inductive	х	х		х	
	deductive deductive deductive deductive deductive deductive deductive	PropTech deductive x deductive x	Derivation PropTech Customers deductive x x deductive x x	DerivationProTechCustomersInvestorsdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxxdeductivexxx	

Source: Heussi, J., Wicki, M. (2020): Erfolgsfaktoren von PropTech-Unternehmen

Customer benefit as

a success factor

Fig. 6: Success factors from quantitative survey

Quantitative assessment of the 15 most important factors for the success of Prop-Techs, from the secondary literature, by the different stakeholder groups.

	PropTechs		Investors		Customers		Consultants		Total	
	Points	in %	Points	in %	Points	in %	Points	in %	Points	in %
Customer benefit	30	22%	6	20%	16	21%	8	27%	60	22%
Team	23	17%	8	27%	5	7%	1	3%	37	14%
Scalability	13	10%	4	13%	8	11%	4	13%	29	11%
Financing	14	10%	7	23%	5	7%	0	0%	26	10%
Unique selling point*	8	6%	2	7%	6.5	9%	5	17%	21.5	8%
Network	10	7%	3	10%	3	4%	0	0%	16	6%
Business model	7	5%	0	0%	6	8%	2	7%	15	6%
Familiarity/Visibility	8	6%	0	0%	2.5	3%	3	10%	13.5	5%
Integration opportunity	2	1%	0	0%	7	9%	4	13%	13	5%
Sector knowledge	10	7%	0	0%	2	3%	0	0%	12	4%
Platform independence	3	2%	0	0%	5	7%	2	7%	10	4%
Security	4	3%	0	0%	6	8%	0	0%	10	4%
Timing	3	2%	0	0%	3	4%	1	3%	7	3%
Industry dependency	0	0%	0	0%	0	0%	0	0%	0	0%

*Due to proximity in content, we combined the factor imitability and unique selling point.

Source: Heussi, J., Wicki, M. (2020): Erfolgsfaktoren von PropTech-Unternehmen

Customer benefit can be seen as a sine qua non to the success of a PropTech and therefore rightly stands at the top of the ranking of success factors. If a PropTech is not able to generate real added value for its customers with its products or services, it will probably be unable to successfully position itself in the market – no matter how well it does on the other success factors.

Core team as a success factor	Managing a PropTech places very high demands on the management team. Due to strong growth, not only do new customers have to be constantly satisfied, but the structures of the Prop-Tech company also have to be constantly adapted to new requirements. This only works with a strong (core) team. One of the most important, but also most difficult tasks of the founder(s) of a PropTech is therefore to build a core team of competent individuals as the company grows and to retain them with the right incentives. This in turn means that the founders also need to learn to let other members of the core team take part in decisions.
Scalability as a success factor	Scalability is key to the scale of a PropTech's success. Certain business ideas may allow a Prop- Tech to hold its own in the market, but offer it little prospect of ever becoming a large technology company. Low scalability may be due to the fact that the PropTech's innovation can either be cop- ied relatively easily or that each additional customer requires a relatively large amount of effort. The resulting limited earnings potential is particularly problematic for investors. For PropTech1, a European venture capital investor, lack of scalability is the second most frequent reason for reject- ing an investment (26%), right after the most important reason – insufficient product maturity. For venture capitalists, a PropTech must have a scalability potential of about a factor of 10 in the company value for an investment to be considered. This is against the background of the risks taken and the awareness that out of ten investments, only a few will recoup the money invested.
Second order success factors	With the PropTech Survey 2021, we tested the top three success factors using a larger sample. In order not to overload the survey, we only offered ten factors for selection (the eight most important in Fig. 6, supplemented by the factors customer focus and timing). Survey participants also mentioned the factors simplicity, agility and maturity of the relevant market, but only once each. The top 3 factors and their order were confirmed in the survey (Fig. 7). There thus seems to be a relatively large consensus regarding the most important success factors. The second order success factors are grouped behind them. These include the factors unique selling point, timing, network/cooperation, business model and simplicity of product integration. Four of these five factors already featured in the midfield of the key factors mentioned in the Heussi/Wicki Master's thesis. Only timing was rated less highly in the Master's thesis. In the PropTech survey, on the other hand, funding is only in tenth place, while in the Master's thesis it was listed directly behind the top three factors. The additional factor of customer focus, which was derived from the qualitative survey in the Master's thesis, is positioned higher than funding. However, it did not make it into the midfield of the success factors. Accordingly, there is also widespread agreement regarding the factors in the midfield, if not total agreement.

Fig. 7: Success factors of PropTechs

"What are in your opinion the general success factors for PropTechs? Allocate 15 points to your favorites"

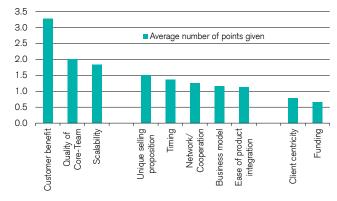
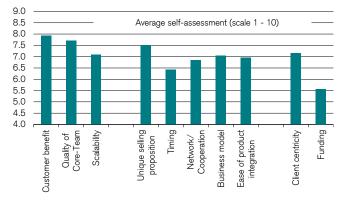


Fig. 8: Self-perception in relation to success factors

"How do you rate your PropTech in relation to these success factors on a scale from 1 (very weak) to 10 (very strong)?"



Source: Credit Suisse PropTech survey 2021 (N = 61)

Source: Credit Suisse PropTech survey 2021 (N = 62)

PropTechs' selfperception in relation to the success factors We also asked the PropTechs to rate their own PropTech in relation to these success factors on a scale of 1 (very weak) to 10 (very strong). The ratings were relatively homogeneous (Fig. 8). On average, the PropTechs see themselves best positioned in terms of customer benefit (7.9 points out of a maximum of 10), quality of the core team (7.7) and uniqueness (i.e. low imitability of their own solution (7.5). They also give themselves a good rating in terms of customer focus (7.2). Of the top three factors, scalability is rated as most critical at 7.1 points. PropTechs see themselves as least well positioned in terms of timing (6.4) and fundraising (5.6), although one is arguably linked to the other. The PropTechs know that they do not have infinite time to establish themselves in the market.

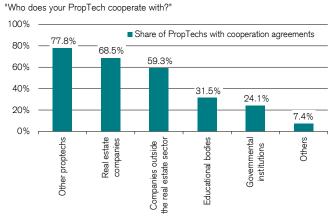
High willingness to cooperate

Cooperation is a high priority in the PropTech sector. In the survey, this factor was placed solidly in the midfield. Over 88% of the PropTechs in Switzerland maintain cooperation with other partners. In Germany, only 72% of the PropTechs confirmed this. Horizontal cooperation with other PropTechs is most common in this country, closely followed by vertical cooperation between PropTechs and real estate companies (Fig. 9). The high willingness to cooperate in the PropTech sector clearly contrasts with the situation in other real estate and construction industries (e.g. general and sole contractors), where a much more pronounced competitive relationship prevails. This is probably due to the high degree of saturation of such mature markets. The market for digital solutions, however, is a distinct growth market, and cooperations are an effective means of growing faster in the market. Many PropTechs have recognized this. The high proportion of cooperations with companies outside the real estate sector also demonstrates that they do not see their sphere of influence as limited to the real estate sector.

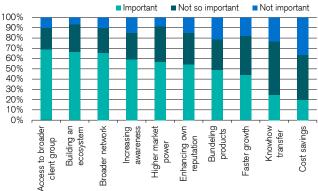
Cooperations are sales-driven

Cooperations with PropTechs are rated as especially important for the broadening of customer groups or the network (Fig. 10). The formation of an ecosystem of different complementary offerings is also identified as an important driver. Cooperation is therefore primarily a means of boosting sales. Synergy effects, such as cost savings or the transfer of know-how, on the other hand, are considered less important. In terms of type of cooperation, technical cooperation (e.g. bundling products via API) dominates over embedding in an ecosystem or in a value chain. Sales and marketing cooperation is less important, and the sharing of personnel or data is insignificant.

Fig. 9: Frequency of cooperation







Trend towards product bundling and ecosystems

Contradictory importance of financing

Two developments are currently shaping cooperations. Firstly, the high growth of PropTechs and their solutions has led to confusing situations. Meanwhile, traditional real estate companies want to integrate digital solutions in a network – not in the form of incompatible individual solutions. The demand for bundling and embedding in overall systems has therefore grown strongly. The high willingness to cooperate within the PropTech sector is therefore probably also a response to this customer demand for offers from a single source. It also reflects PropTechs' willingness to cover a larger part of the value chain for the benefit of their customers, either alone or with partners. It has been shown that cooperation among PropTechs as well as platforms with several combined new ideas and innovations result in the best solutions. Secondly, there is a more noticeable trend towards the formation of ecosystems around PropTech's own core business. The drivers of this development are the network effects that can be achieved as a result. The insurance industry in particular is very active in this regard in Switzerland and is trying to establish PropTech ecosystems.

Source: Credit Suisse PropTech survey 2021 (N = 61)

The feedback regarding the importance of financing is somewhat contradictory. In the Master's thesis, this factor was emphasized in particular by investors and ranked third by the PropTechs surveyed there. In our survey this year, however, it was the least important factor. Irrespective of this, we note that established real estate companies are increasingly coming into play as financiers or as strategic partners. Their share of PropTechs' financing sources has now risen to 18.5% (Fig. 11). In addition to growing maturity and consequently higher financing from their own business activities, this is likely to be the most important reason for the declining level of self-financing among local PropTechs. In the 2019 and 2020 surveys, 76% and 74% of financing still came from PropTechs' founders and partners, respectively. This share has dropped to 61.7% in this year's survey. However, the growing share of strategic investors can also be a double-edged sword for PropTechs, as strategic investors from the real estate industry do not necessarily pursue

Source: Credit Suisse PropTech survey 2021 (N = 61)

	congruent goals. Cooperation or customer relationships with their competitors could be made more difficult as a result.
Young PropTechs in particular seek capital	The question of financing does not arise with the same urgency for all PropTechs. 61% of survey participants reported no need for additional financing. In particular, more than three quarters of early-stage PropTechs (in start-up or validation phase) are looking for additional financing. Among established PropTechs or those on the way to becoming established (maturity phase), only some 20% to 25% are still seeking capital. Obviously, sufficient investors can be found for PropTechs that are advanced in their life cycle, or the relevant companies can already largely cover their financial needs from self-generated funds.
Hurdles in attracting investors	We also wanted to know what most frequently causes capital commitments to fail and what the biggest hurdles are in convincing investors. Generally speaking, several factors are responsible for the failure to obtain financing. Lack of product maturity has emerged as the main reason (Fig. 12). Almost 58% of the PropTechs described this point as either a major or medium-sized hurdle. In a similar vein, almost 55% identified a low number of reference projects as a major or medium-sized hurdle. Many financing operations also fail because founders and investors cannot agree on the valuation of the PropTech. Limited scalability of the business idea and a core team that is too small can also generate skepticism. The lack of a board of directors or advisory board, on the other hand, is less significant. Other hurdles mentioned were a customer base that is too small or shareholding ratios that are not clear enough.

Fig. 11: Sources of financing for PropTechs

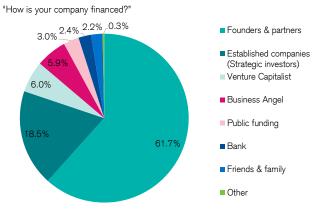
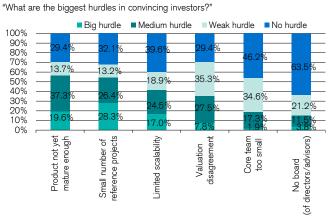


Fig. 12: Largest financing hurdles



Source: Credit Suisse PropTech survey 2021 (N = 50)

Source: Credit Suisse PropTech survey 2021 (N = 62)

Portrait of three participants in the Swiss PropTech Survey 2021

To illustrate the diverse and vibrant PropTech landscape, we give three randomly drawn participants in the PropTech survey the opportunity to introduce themselves.

⊗E-NNO

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https://www.e-nno.ch/



building imagination

Hegias – The automated and browser-based CMS solution for visualization and communication with VR for the construction and real estate industry

The world's first automated and browser-based content management system (CMS) solution for visualizing and communicating with virtual reality (VR) for the construction and real industry industry. Thus, you can intuitively and without any prior knowledge load your planned construction project in 3D via the touch of a button and set it up any way you want with the simple drag-and-drop function. This allows you to view and experience your plans from every angle. It's guaranteed to wow. With HEGIAS VR, builders and buyers can enter a building, look at various materials, furnish it using the drag-and-drop functionality and buy and build based on a dream that they've seen and touched – even though it doesn't even exist yet.

https://hegias.com/



luucy is the digital 3D-WEB-GIS platform for the transformation of our living space

With the simple tools of luucy, settlement developments and local planning can be represented interactively and comprehensibly in the digital 3D twin. The basis for the 3D village model is the legally binding principles of the official cadastral survey. Planners, real estate developers and authorities can model their development scenarios directly on the luucy platform and share their ideas with citizens in a web-based manner - easily, at any time and without expert knowledge. An ideal basis for discussion for all those involved. This makes it possible to identify risks and opportunities of developments at an early stage, which significantly increases planning reliability. Companies from the private sector can offer their data and applications on luucy via open interfaces. In this way, luucy builds bridges between authorities and the private sector with great potential and value added for all parties involved.

https://www.luucy.ch/

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Commodity transactions carry a high degree of risk, including the loss of the entire investment, and may not be suitable for many private investors. The performance of such investments depends on unpredictable factors such as natural catastrophes, climate influences, hauling capacities, political unrest, seasonal fluctuations and strong influences of rolling-forward, particularly in futures and indices.

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June 15, 2021

Construction Index Switzerland 3rd quarter 2021

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