

Archehos and Greensill: collapse, reactions and common features

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Abstract

The recent collapse of certain market operators has reopened the debate on the vulnerabilities of non-bank financial intermediation and their implications from the regulatory and supervisory standpoint. This article focuses on Archegos and Greensill whose collapse, although not systemic, highlights the importance of the interconnections between this type of institutions and the banking sector. It describes the circumstances that led to their collapse, the regulations applicable to them and the main reactions of the competent authorities to date. It then discusses some of the common features that can be identified as determinants and that could inform future debate on these cases from a regulatory and supervisory policy perspective.

Keywords: non-bank financial intermediation, total return swaps, derivatives, interconnections, regulation, financial stability.

1 Introduction

The profound impact of the 2007-2009 global financial crisis led to important changes to regulations applicable to the financial system, which have been developed and implemented over the last decade. A variety of readings and interpretations of the crisis were put forward, and a wide range of measures were adopted to mitigate its consequences and address its causes and underlying vulnerabilities.¹

These vulnerabilities include the widespread use, as from the 1990s, of mechanisms and instruments whose design limits the visibility of the actual level of leverage of certain funding structures.² In recent months, various episodes have put the potential risks of these mechanisms and instruments back on the table. Specifically, this article analyses the cases of Archegos Capital Management and Greensill Capital.

Both cases have highlighted problems linked to the opacity of certain financial mechanisms. Through a web of derivatives contracts with multiple bank counterparties, Archegos, a vehicle set up to manage a family's wealth, had reached high levels of exposure to certain US and Chinese telecom firms. Meanwhile, Greensill dealt in the discounting of invoices issued by the suppliers of ailing companies and financed the business by securitising those invoices.

1 Quarles (2019), Haldane (2017) and FSA (2009).

2 Rajan (2005).

Both business models were therefore characterised by high leverage. And the lack of transparency of this leverage increased its harmful effects when the underlying difficulties came to light: in the case of Archegos, because of the scant information required of this type of institutions and the absence of widespread requirements in the United States on transaction reporting to specialised repositories; and, in the case of Greensill, because of inappropriate application of the accounting standards, which enabled debtor companies to disguise their financial position.

Given their characteristics, the study of these episodes may contribute to assessing the degree of success of some of the reforms implemented in the wake of the global financial crisis. To a large extent, the G20's plan in response to the crisis sought to shed light on certain areas of the new financial intermediation model that had been taking shape in the previous years and addressed factors that have later proved to be essential in cases such as Archegos and Greensill.

Specifically, at its April 2009 meeting,³ the G20 called for greater regulation and supervisory oversight of hedge funds and similar vehicles, focusing on their leverage disclosures, assessment of their potential systemic risks and supervision of the risk management mechanisms put in place by the investment banks operating with such funds (including the setting of limits on their exposures and leverage levels). It also recommended the establishment of central counterparties to strengthen credit derivatives markets and help standardise their traded contracts. Problems related to these areas have resurfaced in the Archegos case.

The G20 meeting also addressed some of the problems relating to banks' excessive leeway for creating off-balance-sheet financial structures, for instance, by using structured or special-purpose vehicles (SPVs) to securitise pools of credit exposures that were taken off banks' balance sheets regardless of the degree of involvement and support of the originating bank. These aspects have re-emerged in the Greensill episode.

More generally, all these measures sought to address the problem of using securities portfolios to engineer highly leveraged arrangements, either by creating financing chains supported by those same securities, or through structures based on the use of complex derivatives instruments, designed to increase the synthetic exposure to the risks and rewards of certain types of assets.

Moreover, the legal and regulatory context favoured the transfer of exposures from banks' balance sheets to those of operators subject to lighter regulatory requirements. First, the securities issued as a result of this process were given a high credit rating, on which many of the regulatory requirements were based. This provided the holders of these securities with an additional source of liquidity, either through their sale

³ G20 (2009).

under a repurchase agreement (repo) or use as collateral in derivatives transactions. Second, certain legal systems (mainly common law systems) allow pledging (re-hypothecation) of securities acquired in repo transactions⁴ and grant creditors with claims relating to derivatives or repo transactions priority in insolvency proceedings.⁵

In the years following the April 2009 G20 meeting, the Financial Stability Board (FSB), along with the various international regulatory bodies, established mechanisms for discussing and coordinating measures to implement the recommendations and reforms agreed. With the aim of reducing the opacity of the new financing structures, the definition of control and the scope of consolidation were expanded⁶ and guidelines were established for the reintermediation of exposures.⁷ Regarding the excessive leverage prompted by the use of assets to support such structures, in 2013 the FSB published a policy framework for addressing shadow banking risks in securities lending and repos,⁸ dealing with issues such as re-hypothecation of collateral assets. Since 2016, all FSB members with hedge funds and similar operators have reported compliance with the G20 recommendations described above.⁹

Regarding reforms in derivatives markets, in 2020 the FSB reported significant progress in areas such as the reporting of transactions to trade repositories, central counterparty clearing, strengthening of the resilience of central counterparties, and margin requirements for non-centrally cleared derivatives.¹⁰

However, despite this considerable progress, episodes such as Archegos and Greensill have once again highlighted the risks and vulnerabilities associated with some of these activities. Section 2 describes each of these episodes against the backdrop of the key regulatory frameworks applicable to both. Section 3 presents the authorities' reactions and Section 4 identifies common determinants that could be part of a future analysis of these cases from a supervisory and regulatory perspective.

2 Description of the cases

The Archegos and Greensill cases have resulted in significant losses for some systemically important banks, but their business and applicable regulations differ, as do the drivers of those losses. Each of these two cases is therefore described separately below.

4 FSB (2017).

5 Duffie and Skeel (2012).

6 IFRS 10 (summarised in IAS Plus: <https://www.iasplus.com/en/standards/ifrs/ifrs10>).

7 BIS (2017).

8 FSB (2013).

9 FSB (2020b).

10 FSB (2020a).

2.1 Archegos

Archegos Capital Management was a US hedge fund structured as a family office¹¹ to manage Bill Hwang's wealth.¹² Family offices are exempt from some of the requirements applicable to other investment firms, for example in relation to the reporting of their exposures. Although the Dodd-Frank Act (DFA) introduced stricter regulations for investment advisers, to enable the US Securities and Exchange Commission (SEC) to oversee hedge funds, it left the treatment of family offices to the discretion of the SEC. In 2011, the SEC approved rules defining the criteria for exempting these vehicles from registration and certain investor protection rules.

Although the exact figures are unknown, Archegos held assets in the order of \$10 billion, with exposures of between \$50 billion and \$100 billion (even higher according to some reports). These exposures were largely concentrated in shares of ViacomCBS and Discovery (US telecommunications groups) and in various Chinese technology companies (e.g. Baidu).

The leverage required to reach this volume of exposure was achieved through the use of total return equity swaps, contracts whereby one of the parties takes a synthetic long position in the underlying asset, thus obtaining returns (dividends and price appreciation) in exchange for assuming its potential depreciation (see Figure 1). In exchange for the corresponding fee and margin calls, the counterparty to the transaction takes a synthetic short position in the underlying asset, which it usually hedges by acquiring the corresponding securities. This was the case of the investment banks acting as prime brokers¹³ for Archegos (Goldman Sachs, Morgan Stanley, Credit Suisse and Nomura),¹⁴ which therefore paid the return on the underlying asset in exchange for a fee (in some cases linked to an interest rate benchmark index). When the underlying asset appreciated, the prime brokers paid the increase in value to Archegos, whereas if it depreciated, the family office had to compensate the broker.

In the United States, the SEC is responsible for regulating all security-based swaps, including total return swaps, while the Commodity Futures Trading Commission (CFTC) is responsible for all other swaps. In line with the G20 agreement in the wake

11 These are management companies used by high net worth investors that offer all the services associated with wealth management, along with additional services for family members (such as tax and wealth planning services). They are often exempt from some of the requirements that apply to other investment firms (e.g. disclosure of their investments), as they have no clients outside the family.

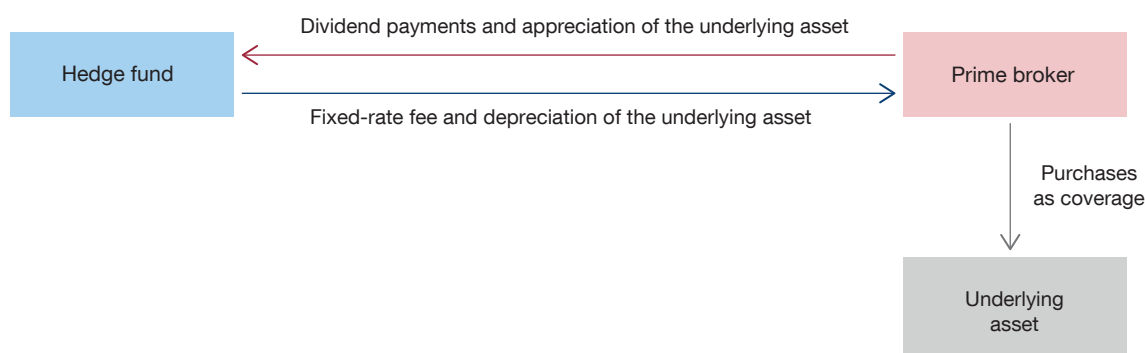
12 In 2012, Bill Hwang pleaded guilty in an insider trading case in the United States in which his investment fund, Tiger Asia Management, had profited from trading in Chinese bank securities, resulting in a \$44 million fine.

13 Hedge funds and other investment vehicles like Archegos use the prime brokerage services offered by investment banks and other financial institutions. These services include cash management or securities custody, but are mainly related to the provision of finance, either through securities lending or through structures such as the one described above, thus enhancing the leverage of their clients.

14 Other institutions have also been mentioned, such as Deutsche Bank, Wells Fargo and UBS.

Figure 1

TOTAL RETURN EQUITY SWAP OPERATIONS



SOURCE: Devised by authors.

of the global financial crisis, the DFA prompted derivatives market reforms, particularly for bilaterally traded (over-the-counter) derivatives. The reforms included reporting the terms and conditions of derivatives market transactions to trade repositories in order to improve market transparency. Only the CFTC has implemented such measures for the instruments under its remit. The information on Archegos' derivatives trades, which fall under the SEC's remit, is not yet available.¹⁵ Thus, neither the level of concentration of the family office's exposure to the securities of a small group of companies, nor the existence of highly leveraged positions with several prime brokers, was known.

Similarly, margin requirements were in place for firms with high notional values of non-centrally cleared derivatives, but not for smaller ones like Archegos. Although the deadlines have been postponed due to the pandemic, the SEC expects¹⁶ to implement these requirements for firms under its remit by end-2021.¹⁷

Against this background, in late March 2021 the value of some of the shares in which Archegos held open positions, such as ViacomCBS, fell sharply,¹⁸ which meant that

15 In May 2021, the SEC announced the launch of the first security-based swap data repository, which will come into force in November 2021. See SEC (2021a).

16 As with the registration of security-based swaps, the SEC's margin rules for these transactions will also come into force in November. See SEC (2020) and the [Key Dates for Registration of Security-Based Swap Dealers and Major Security-Based Swap Participants](#) section of its website.

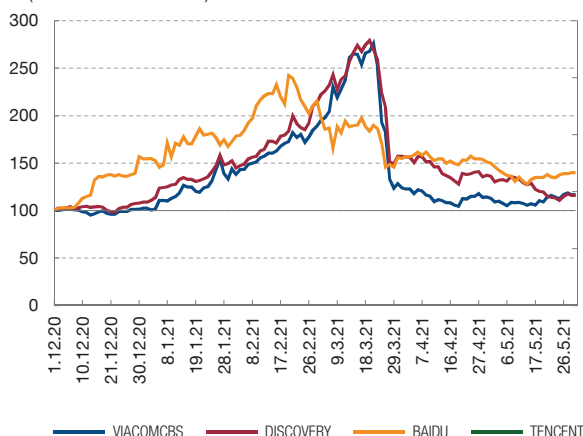
17 Regarding the regulatory framework applicable to situations such as Archegos', the Basel Framework addresses derivatives transactions through both their risk-based (counterparty or market risk) capital requirements and the leverage ratio.

18 These price falls were due to ViacomCBS' announcement that it would launch a \$3 billion public share offering, designed partially to boost its streaming services (weeks after launching its Paramount+ platform). Although some analysts (CNBC, 2021) considered this was the right strategy, many expressed doubts given the level of competition (Netflix, Disney+) in the sector. This price correction, prompted by the share offering, which diluted existing shareholders' ownership, interrupted the share price increase seen early in the year in response to this traditional telecommunications company's announcement that it intended to boost its streaming services.

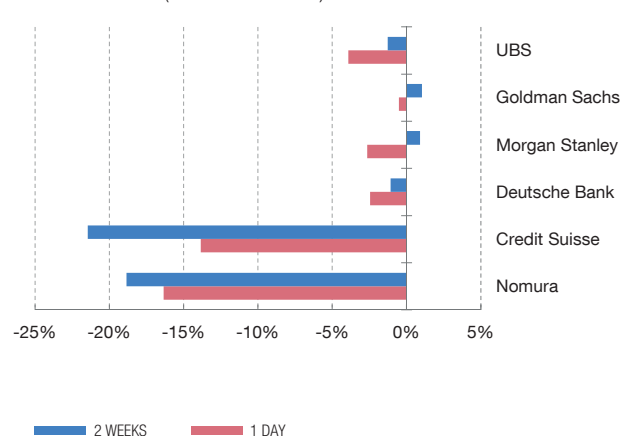
Chart 1

DAILY CLOSING PRICES

1 SHARES IN THE ARCHEGOS PORTFOLIO
(1 December 2020 = 100)



2 IMPACT ON THE SHARE PRICE OF THE BANKS THAT HAD ARCHEGOS AS A CUSTOMER (since 26 March 2021)



SOURCES: Bloomberg and own calculations.

it was unable to meet the corresponding margin calls¹⁹ (see Chart 1). On Thursday 25 March, Bill Hwang called a meeting with the aforementioned investment banks to try to unwind the transactions in an orderly fashion. However, the next day, once the likely consequences of Archegos’ high level of leverage became apparent, some of these banks (initially, Goldman Sachs and Morgan Stanley) began to sell the shares that covered their short positions. This drove down the stock price further, inflicting larger losses on banks that were slower to sell (over \$4.5 billion in the case of Credit Suisse²⁰ and around \$2 billion in the case of Nomura). As a result, the stock price of both banks fell sharply (on Monday 29 March, Credit Suisse’s share price fell by more than 14% and Nomura’s by 16%).

2.2 Greensill

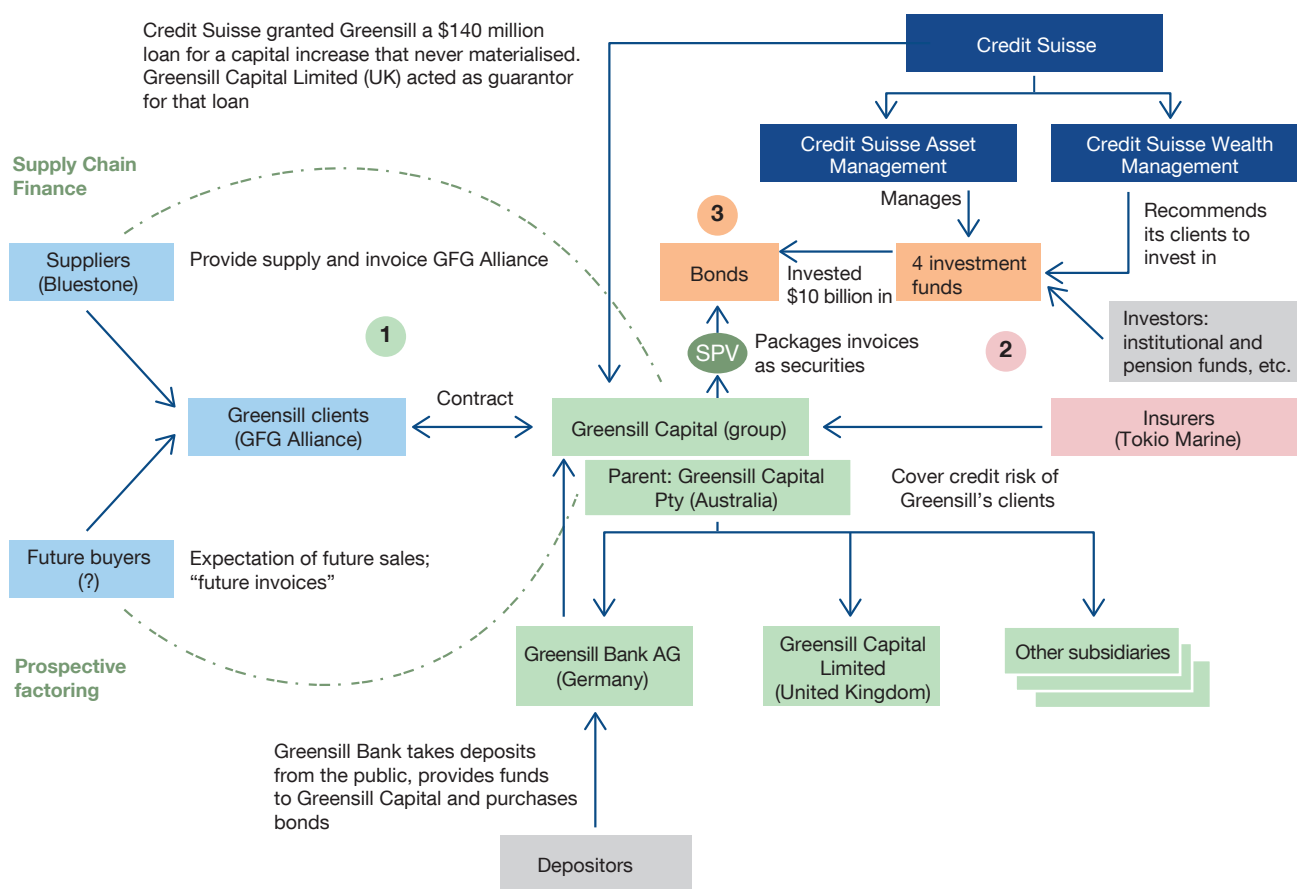
Greensill, an Anglo-Australian financial group with global presence, had been created as a fintech and operated a simple business model focused on factoring and supply-

19 Additional guarantee to be provided by investors in the margin account held with their broker due to losses in their trades which cause the value of the collateral to fall below a contractually established percentage (based on regulations and broker policy) of their total investments. If investors are unable to meet this call, the broker may be forced to sell the securities in the account outright.

20 In its 2021 Q1 report, Credit Suisse announced that its results included a CHF 4.4 billion provision for credit losses linked to the Archegos case. The document also stated that it had already unwound 98% of the positions related to this company and announced additional losses of CHF 600 million for 2021 Q2 as a result of market movements when closing these positions. In its 2021 Q2 report, Credit Suisse recognised additional losses of CHF 594 million associated with this case (losses of CHF 493 million as a result of market movements during the close-out of positions, a credit loss provision of CHF 70 million and operating expenses of CHF 31 million mainly reflecting severance-related costs and professional service fees).

Figure 2

STYLISED VERSION OF GREENSILL'S MODUS OPERANDI



SOURCE: Devised by authors.

chain financing or reverse factoring. With a corporate structure that included a subsidiary in the United Kingdom as its main operations centre and a bank headquartered in Germany, Greensill began by offering conventional financing services linked to the above-mentioned business model, specifically traditional factoring (purchase of a company's accounts receivable) and reverse factoring (advancing payment to a customer's suppliers based on approved invoices). Subsequently, in its search for higher profitability, Greensill expanded its business model to include prospective factoring, which consists in lending against prospective receivables, based on mere expectations of future business rather than actual transactions.

Greensill leveraged its business by packaging and securitising invoices. The securitised assets were distributed through Credit Suisse investment funds and their credit rating was enhanced through insurance policies subscribed with major insurers and which covered borrower default risk (see Figure 2).

Greensill's subsidiary in the United Kingdom was registered with the Financial Conduct Authority (FCA) for the purpose of compliance with anti-money laundering regulations.

Its other activities did not fall under the remit of either the Bank of England's Prudential Regulation Authority or the FCA itself. Greensill Bank, the German subsidiary, was subject to control by BaFin, the German supervisory authority.

The collapse of Greensill was the result of a complex series of events closely linked to its business model, as described below:

1 Greensill's transactions with its clients (reverse and prospective factoring)

Greensill's collapse is connected with its supply-chain financing transactions and how they were reflected in the financial statements of the companies involved.

Through reverse factoring, Greensill and its peers in this market segment bridged working capital gaps at firms which, either because of the nature of their activity or of their poor financial condition, were unable to meet payments to suppliers out of their own trade flows. Supply-chain financing prevents working capital disruption and enables these firms to maintain the terms agreed with their suppliers, assuming greater leverage.

The main international accounting standard-setters – the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) – have repeatedly insisted on the need to correctly report the consequences of these transactions, recalling the principles and requirements already in place²¹ and emphasising their significant impact and the liquidity risk caused by concentration of a large part of firms' obligations at a single financial institution. Instead of reflecting debt with the financial institution for the amount corresponding to the financed period, i.e. from the point at which the payment is made to the supplier until the end of the payment period agreed, the general practice was to treat the full amount as a trade debt, which meant it was not considered when calculating the firm's leverage.

Supply-chain financing can generate adverse selection problems, with possibly more severe consequences in the event of increased concentration. Indeed, this was the case of Greensill, which had extensive exposure (around \$5 billion) concentrated at one client, the metal giant GFG Alliance. In addition, Greensill financed GFG group firms through prospective factoring (i.e. on the basis of expectations of future transactions).

Eventually, the financial difficulties faced by GFG Alliance and other Greensill clients triggered a wave of defaults in 2020, which in some cases even led to insolvency.

21 IFRS (2020).

2 Expiry of Greensill’s insurance policies with Tokio Marine and other insurers

Insurance against customer default was a crucial element in Greensill’s business model. As a result of the difficulties described, in late February 2021 Tokio Marine and other Greensill insurers refused to renew policies for an amount of \$4.6 billion.

In light of this, on 3 March 2021 BaFin ordered a moratorium on Greensill Bank’s activities, owing to the imminent risk of a headlong flight into over-indebtedness.

3 Securitisation of invoices and its impact on Credit Suisse

Credit Suisse managed four investment funds which together had invested in \$10 billion worth of securities issued by Greensill and backed by invoices acquired through its factoring and reverse factoring operations. Given the difficulties described above and the consequent uncertainty surrounding the value of these securities, in March 2021 Credit Suisse decided to freeze the funds. This blocked Greensill’s activity, which was largely underpinned by these securitisations.²² It is estimated that Credit Suisse has so far reimbursed a total of \$6.6 billion to unit holders of the four funds.²³

All these factors combined – the adverse selection intrinsic to the business model, the excessive concentration vis-à-vis GFG Alliance, the cancellation of the insurance policies, the inability to mobilise funds through the banking subsidiary in Germany, and the freezing of funds from which it obtained much of its financing – prompted Greensill Capital to file for bankruptcy in the United Kingdom. Shortly afterwards, BaFin ordered that insolvency proceedings be opened against Greensill Bank in the German courts and the group’s Australian parent company (Greensill Capital Pty) also filed for bankruptcy.

3 Authorities’ response

Authorities have expressed their views on both cases. So far they have insisted that interactions between the non-bank and the banking sector were already being addressed, flagging the importance of understanding the causes of these episodes, how they unfolded and their consequences, in order to avoid their recurrence.

22 Credit Suisse’s relations with Greensill were not limited to marketing these funds. Lex Greensill, the company’s founder, was one of Credit Suisse Wealth Management’s leading customers. Moreover, Credit Suisse advised its customers to invest in these funds, and Credit Suisse Group AG had extended a \$140 million loan to Greensill for a capital increase that never materialised. Greensill Capital UK acted as guarantor for that loan.

23 As per the 2021 Q2 earnings release published in July (Credit Suisse, 2021a and 2021b).

3.1 Archegos

The Archegos episode prompted scrutiny by the US, European and Japanese authorities, initially to analyse whether or not all the institutions involved acted correctly and to assess the functioning of the regulatory and supervisory infrastructure in place.

The Federal Reserve's Financial Stability Report highlighted how this event, whose impact on markets and the financial system appears to be limited, serves as a reminder of the potential risk posed by non-bank financial institutions. This has been highlighted by regulators such as Jerome Powell, Chair of the Federal Reserve's Board of Governors, who attributed the problem to a risk management breakdown on the part of the prime brokers who understood the risks associated with Archegos' business but were incapable of detecting the extent of its leverage and risk concentration, as they were unaware that Archegos was entering into the same transactions simultaneously with various banks.²⁴

The lack of information on Archegos' operations has also been flagged. As a family office, Archegos was not required to provide data on its transactions to either the regulators or trade repositories. As early as 1 April 2020 CFTC Commissioner Dan Berkovitz cited the collapse of Archegos as a clear example of the havoc that large investment vehicles known as family offices can wreak on the financial markets.²⁵ In his statement, he criticised the easing of regulation and supervision applicable to these institutions, which manage billions of dollars. In turn, Lael Brainard of the Federal Reserve noted the limited visibility into hedge fund exposures, which may suggest a need for greater transparency requirements, including more granular and frequent disclosures.²⁶ Furthermore, SEC Chair Gary Gensler called for greater consideration of the potential impact that certain individual firms can have on the financial system, in order to reassess the exemption of family offices from margining and disclosure requirements.²⁷

Some voices have also pointed to the failure to implement some of the rules agreed for derivatives markets (such as reporting or margining requirements), which would have mitigated the impact of this episode. Other experts argue that margin requirements would not have prevented Archegos from leveraging or from distributing its exposures between several institutions.

However, others question the criticism of the existing transparency and regulations, arguing that risk management is the key factor to consider in transactions of this kind, and that these episodes should be used as examples for sophisticated investors

24 CBS (2021).

25 Berkovitz (2021).

26 Brainard (2021)

27 Gensler (2021).

of the need to review their risk management systems, organisational culture and incentives structure.²⁸

This was the approach adopted by FINMA, the Swiss supervisory authority, within the formal proceedings opened in April as a consequence of the significant losses incurred by Credit Suisse. In particular, the proceedings aim to investigate the risk management issues that surfaced at Credit Suisse. Like other authorities, such as the Department of Justice, SEC, CFTC and the Senate Banking Committee in the United States, or the FCA in the United Kingdom, FINMA requested documents and relevant information from Credit Suisse during the process. In addition, in late March 2021, FINMA imposed a temporary capital surcharge connected to the credit risk of Credit Suisse's investment banking business, which added some \$6.1 billion to its credit risk-weighted assets. The surcharge was later withdrawn in Q2.

At the international level, Carolyn Rogers, Secretary General of the Basel Committee on Banking Supervision (BCBS), said that although it is too early to consider a regulatory response, the BCBS will probably intensify the scrutiny of structured financial products and total return swaps.²⁹ The Basel Framework envisages the prudential treatment of derivatives transactions to which banks are exposed. It considers these transactions not only in terms of their margining requirements, but also from the perspective of their risk-based requirements (counterparty or market risk) and leverage ratio.

3.2 Greensill

In the case of Greensill, as indicated above, in March 2021 BaFin³⁰ banned Greensill Bank from making payments, owing to its high indebtedness and to secure its asset value. BaFin also ordered that it cease its business with customers and prohibited it from accepting payments not intended for repaying debts held with the bank. Just two weeks later, BaFin ordered that insolvency proceedings be opened against Greensill Bank.³¹ In turn, FINMA announced the opening of proceedings against Credit Suisse in April, taking several measures to reduce the bank's risk exposure, including organisational matters and cuts in or suspension of variable remuneration. As in the case of Archegos, FINMA also resolved to apply a capital surcharge of \$1.9 billion (equivalent to 62 basis points (bp) of its CET1 requirements and 19 bp of its leverage ratio).

In the United Kingdom, the House of Commons Treasury Committee carried out an investigation, outlining the elements to be considered to determine whether or not

28 Bloomberg (2021e).

29 Bloomberg (2021d).

30 BaFin (2021b).

31 BaFin (2021a).

institutions such as Greensill, which have so far avoided the regulatory perimeter, should be subject to regulation. In his statement to the Committee, Jon Cunliffe, Deputy Governor of the Bank of England, expressed his opposition to linking inclusion in the regulatory perimeter exclusively to an operator's potential systemic nature, arguing that there are other important factors to consider, such as consumer and investor protection.³² The above-mentioned investigation resulted in a report on lessons learned, which concluded that, in principle, the Greensill case alone would not justify a review of the regulatory perimeter to include supply-chain financing. However, it did constitute a warning on the need to enhance the scrutiny and supervision of non-bank financial institutions and, specifically, on the need to improve their transaction data. Moreover, the Bank of England has insisted on the need to improve the information available on non-bank financial intermediaries. In this vein, the possibility of authorising regulatory agencies to compile that information, with a view to preserving financial stability, has been discussed in the United Kingdom.

Regarding the accounting treatment of supply-chain financing, in June 2021 the IASB resolved to include an amendment of IAS 7 (which establishes the additional information to be provided in financial statements) in its work programme, with a view to incorporating requirements to enhance the transparency of supply-chain financing.³³ In the United States, the FASB has adopted a similar approach, and in September 2021 proposed a standard also aimed at increasing the information on financing structures of this kind.

4 Conclusions and features common to both episodes

In recent months, the Archegos and Greensill episodes (as well as others such as GameStop)³⁴ have reignited the debate on the vulnerabilities and risks associated with certain activities of the non-bank financial sector and their interconnections with the banking sector.

There has been extensive coverage of these episodes by experts and in the specialised press. Some studies have compared these operations with banking sector activity, referring to the need to apply the principle of “same risk, same activity, same regulation” provided the same economic functions are performed.³⁵ This is especially relevant in the current setting, where the low interest rate environment can encourage the use of certain structures to boost profitability. For this reason, and despite the wide range of activities included in the non-bank sphere, it is vital to

32 UK House of Commons Treasury Committee (2021).

33 <https://www.iasplus.com/en/standards/ifrs/ifrs10>.

34 For more information on the GameStop case, see SEC (2021b).

35 Basquill (2021).

ensure that risks are addressed consistently throughout the system, avoiding potential regulatory arbitrage.

The events described here demonstrate the importance of addressing risks to the financial system, irrespective of their origin. Although there are significant differences between the Archegos and Greensill episodes, there are also some common features:

- In both cases the non-bank agents involved were overleveraged. This ultimately prevented them from meeting their financial obligations, triggering the liquidity crisis and subsequent insolvency.
- Both cases underline the potentially systemic importance of the interconnections between the banking sector and other parts of the financial system (such as investment funds or credit intermediaries). Both at Archegos and Greensill, the banking sector played an important role as the ultimate financing channel. Although in the end losses did not reach systemic scale, the events are a reminder that the financial system can be exposed to the consequences of firm-specific shocks.
- The episodes highlight the importance of proper risk management.³⁶ Banks with weaker risk management practices were most severely affected and are thus in the spotlight of the analysis and main reactions.
- The information and data needed to assess the exposures and risks (including on derivatives transactions, financing chains or closed-end investment vehicles) have not always been available. Although a number of reforms undertaken over the last decade have addressed some of these gaps, part of the opacity remains (for instance, regarding certain parts of financing chains, or closed-end investment vehicles that are subject to less stringent reporting requirements).

None of these are new issues. Indeed, these events have underlined the importance of implementing some of the reforms agreed in the wake of the global financial crisis (for example, in the area of derivatives). In this respect, in its strategy to cast light on the shadow banking sector, the FSB defined five economic functions associated with potential sources of systemic risk. Both episodes analysed here featured activities associated with each of these economic functions: at Greensill, lending on the back of short-term funding structures, asset securitisation and the use of

³⁶ The risk culture and risk management deficiencies were highlighted in the independent external investigation on the Archegos case carried out by Paul, Weiss, Riffkind, Wharton & Garrison LLP at the request of Credit Suisse. For instance, according to the report, Credit Suisse had repeatedly breached its internal limits on potential exposure to Archegos since spring 2020, with no response in terms of risk mitigation measures, despite discussions on ways to modify the margin calculation model. See Credit Suisse (2021c).

insurance to enhance the credit quality of the securities issued; and at Archegos, an investment vehicle leveraged through intermediaries to operate in the financial markets.

For this reason, both these cases highlight the importance of the international projects that were already under way for the non-bank sector. In this respect, bodies such as the FSB have placed special emphasis on the work on non-bank financial intermediation, endeavouring to address vulnerabilities identified during the market turmoil of March 2020. This includes developing an approach to assess the potential systemic risk generated by this area of the financial system and to design the corresponding measures. Work such as that being undertaken by the FSB on risk monitoring in the non-bank sector, analysis of interconnections within the financial system and assessment of risks linked to institutions such as investment funds is vital from a supervisory and regulatory standpoint to minimise the risk that cases of this kind may recur in the future.

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