



Surviving—and prevailing— in the US subprime-mortgage market

Despite recent dramatic downturns and the threat of increased regulation, subprime-mortgage opportunities still abound for players that are willing to wait for an upturn and can stomach the attendant risks.

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A dramatic shakeout in the US subprime-mortgage market has dominated financial headlines in recent months. Credit deterioration and liquidity freezes—which have had a swift and painful impact on lending and capital markets—are driving the cycle, with many large banks cutting back their exposure to subprime lenders. Nearly 50 percent of subprime origination capacity has either disappeared as a result of bankruptcy or been acquired at distressed valuations (Exhibit 1).

Despite this steep downturn, our view is that subprime-mortgage lending, which has risen from 10 percent of originations in 1998 to more than 22 percent recently, is unlikely to disappear. As Angelo Mozilo, CEO of Countrywide Financial, has noted, even in these difficult times more than 80 percent of subprime borrowers are still current on their principal and interest payments. Moreover, both Fannie Mae and Freddie Mac, the US government-sponsored enterprises that support liquidity in the home mortgage market, have recently announced plans to increase their subprime investments by

tens of billions of dollars. Both have pledged to help delinquent subprime borrowers refinance into more affordable mortgages, thereby avoiding disclosure, through new products such as 40-year mortgages and reduced adjustable rate margins.

Significant increases in the immigrant population of the United States and continued unmet demand for low-to moderate-income housing will likely underpin consumer demand for subprime-mortgage lending in the long term. Immigrants account for approx-

Exhibit 1

Going, going, gone

Nearly half of the companies in the subprime industry are exiting the market, are for sale, or are being acquired by other institutions.

Diminishing capacity in the subprime-lending industry

Exited or distressed lenders

Company ²	Share of total subprime origination volume, 2005 ³ 100% = \$665 billion	
	%	\$ billion
New Century Mortgage	7.9	52.7
Fremont Investment and Loan	5.4	36.2
Ownit Mortgage Solutions	1.2	8.3
People's Choice Mortgage	0.9	5.7
SouthStar Funding	0.8	5.6
FMF Capital	0.6	3.8
Meritage Mortgage	0.5	3.2
Mortgage Lending Network	0.5	3.0
Others	3.5	23.3
Total exited or for-sale volume	21.3	141.8

Confirmed acquisitions¹

Company ²	Share of total subprime origination volume, 2005 ³ 100% = \$665 billion	
	%	\$ billion
Argent Mortgage (Citigroup)	6.7	44.6
Option One Mortgage (Cerberus Capital Management)	6.1	40.3
First Franklin Financial (Merrill Lynch)	4.4	29.3
GMAC-RFC (Cerberus Capital Management)	3.8	25.3
EquiFirst (Barclays)	1.3	8.8
Fieldstone Investment (C-Bass)	1.1	7.5
ResMae (Citadel)	1.0	6.9
MortgageIT (Deutsche Bank)	0.6	4.1
Saxon Mortgage (Morgan Stanley)	0.5	3.3
Encore Credit (Bear Stearns)	0.2	1.4
Total acquired volume	25.7	171.5

Total market volume held by exited, distressed, or acquired subprime lenders = 47.0%

¹Excludes loan portfolio and asset purchases.

²Includes only those lenders with publicly available 2005 data on loan origination volume.

³Latest available data; discrepancies between % and dollar figures are because of rounding.

Source: *Inside Mortgage Finance*, 2005, Inside Mortgage Finance Publications; *Mortgage Industry Directory*, National Mortgage News; SNL Financial; McKinsey analysis

imately 12 percent of the total population of the United States, the highest percentage in eight decades, and the vast majority of these newcomers have either limited or no credit history. For many such households, a subprime mortgage is still the only way to achieve home ownership. Meanwhile, demand for affordable housing, which remains unmet for approximately 63 percent of the 45 million low- to moderate-income households in the United States, is expected to grow steadily by nearly 1 percent a year. The industry will continue to have a meaningful role even if only a small percentage of these households take out a subprime loan in the future (Exhibit 2).

The current market uncertainty, associated primarily with fears of a recession and a housing-market collapse, creates an opportunity for participants to review their strategies and operations, lay out a clear action plan, and consider some practical steps that will put them in a better position when healthier markets return.

Strategic considerations

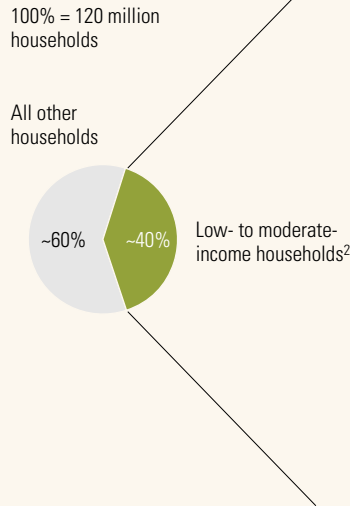
The recent, dramatic ills of the US subprime-mortgage market have inevitably encouraged a short-term focus. However, industry players must also look ahead and plan appropriately for growing consolidation, continued vertical integration,

Exhibit 2

Unmet demand

The demand for affordable housing remains unmet for nearly two-thirds of low- to moderate-income households in the United States.

US households, 2005¹



Housing supply/gap as % of low- to moderate-income US households

	2003	2004	2005	2006	2007	2008	CAGR, ⁴ 2003-08, %
100% in millions of households =	43.6	44.6	44.9	45.1	45.4	45.7	0.6
Affordable-housing gap ³	63	64	65	66	67	67	1.8
Affordable-housing supply ³	37	36	35	34	33	33	-1.5

Estimated

¹Latest available data.

²All households earning ≤80% of real median income.

³Affordable-housing gap is defined as number of households living in housing that costs >30% of annual income for families earning ≤80% of area median income (AMI) for their metropolitan statistical area (MSA); affordable-housing supply defined as number of housing units that cost <30% of annual income for households earning ≤80% of AMI in their MSA.

⁴Compound annual growth rate.

Source: American Housing Survey, US Census Bureau; Joint Center for Housing Studies, Harvard University; McKinsey analysis

and the possibility of increased government regulation.

Increasing concentration

Until recently, the mortgage business was an exception to broader consolidation trends in the financial-services marketplace. However, the subprime shakeout is speeding up a new wave of rationalization that is likely to intensify competition for the best customers. Such customers will demand strong products combined with great service and convenience, advantages that can be offered only by lenders possessing top-notch product-manufacturing and distribution capabilities. As a result, further consolidation in the mortgage-lending market—resembling the rapid consolidation in credit cards over the

past decade—can be expected. The top ten credit card companies have 87 percent of the market today, versus 59 percent a decade ago, whereas the top ten mortgage companies still accounted for only 64 percent of the market in 2006.

Universal banks and vertically integrated broker-dealers and hedge funds—characterized by greater access to liquidity, a lower cost of funds, diversified revenue streams, and greater hedging capabilities—will benefit most from the changes currently roiling the market. We expect to see larger “balance sheet” lenders offering innovative new products to certain market segments, just as Wachovia’s Mortgage Express loan and Countrywide’s Fast & Easy Loan have launched products that

Exhibit 3

Under one roof

Recent moves by the leading broker-dealers to build or acquire captive originators are bringing asset management, loan origination, securitization, and structuring of collateralized debt obligation under one roof.

■ Integrated player, ie, company operating in multiple mortgage functions

Loan origination ¹		Warehousing		Servicing		Primary funding (mortgage-backed security underwriting)	
Companies, in order of 2006 rank (2002 rank) by loan origination volume	Share, ² %	Companies, in order of 2005 rank ³ (2002 rank) by loan origination volume	Share, ² %	Companies, in order of 2006 rank (2002 rank) by loan origination volume	Share, ² %	Companies, in order of 2006 rank (2002 rank) by loan origination volume	Share, ² %
1. HSBC (1)	8.8	Ameriquest Mortgage (5)	10.7	Countrywide Financial (7)	9.6	Lehman Brothers (2)	11.5
2. New Century Mortgage (4)	8.6	Countrywide Financial (10)	7.5	JPMorgan Chase (10)	6.8	RBS Greenwich Capital (4)	10.6
3. Countrywide Financial (8)	6.8	Lehman Brothers (2)	7.0	CitiFinancial (Citigroup) (1)	6.5	Morgan Stanley (5)	8.0
4. CitiMortgage (Citigroup) ⁴	6.3	New Century Mortgage (8)	6.4	Option One Mortgage (5)	5.6	Merrill Lynch ⁴	7.7
5. WMC Mortgage ⁴	5.5	GMAC-RFC ⁴	5.6	Ameriquest Mortgage (8)	4.8	Countrywide Financial (9)	7.6
6. Fremont Investment and Loan ⁴	5.4	Option One Mortgage (6)	5.3	Ocwen Financial (4)	4.2	Goldman Sachs (7)	6.5
7. Ameriquest Mortgage (6)	4.9	Bear Stearns ⁴	4.1	Wells Fargo (20)	4.1	Deutsche Bank (10)	6.4
8. Option One Mortgage (5)	4.8	Credit Suisse (3)	3.9	Homecomings Financial (6)	4.0	Credit Suisse ⁴	6.2
9. First Franklin Financial (Merrill Lynch) ⁴	4.6	WMC Mortgage ⁴	3.9	HSBC Mortgage Services ⁴	4.0	JPMorgan Chase ⁴	5.8
10. Washington Mutual ⁴	4.4	First Franklin Financial (Merrill Lynch) (14)	2.8	Litton Loan Servicing ⁴	4.0	Bear Stearns ⁴	5.1
Share of top ten = 60.3%		Share of top ten = 57.2%		Share of top ten = 53.9%		Share of top ten = 75.4%	
Total market (estimate) = \$640 billion		Total market (estimate) = \$510 billion		Total market⁵ = \$1,200 billion		Total market = \$483 billion	

¹Origination volumes for selected lenders are still under revision.

²Share of total volume of given category.

³Latest available data.

⁴Not ranked previously.

⁵Subprime-servicing balances.

Source: *The 2006 Mortgage Market Statistical Annual*, Inside Mortgage Finance Publications; Mortgage Bankers Association

appeal to customers looking for speed and convenience, while niche providers such as E*Trade Financial now promote portable or offset mortgages.

Vertical integration

Vertical integration across the mortgage finance value chain is hardly new: over the past decade, originators have launched capital markets desks to gain access to liquidity. But the relatively recent move by leading broker-dealers to build or acquire captive originators has resulted in true integration (Exhibit 3), connecting, under one roof, loan origination with securitization, collateralized-debt-obligation

structuring, and asset management (see sidebar, “What’s next for collateralized debt obligation and other credit-intensive businesses?”).

Leaders such as Lehman Brothers and Bear Stearns have shown that this vertically integrated model leads to better performance and risk management, as well as increased flexibility to experiment with and exit from innovative, high-margin products such as option ARMs (adjustable-rate mortgages). Vertically integrated lenders have fueled growth in the securitization of nonconforming loans and are now able to bid for loans and portfolios in

the same way that government-sponsored entities do.

The additional possible benefits of vertical integration for universal banks include the potential to cross-sell mortgages to new customers, especially those coming through retail branches; the greater retention of existing nonmortgage clients; and higher productivity among retail loan officers.

Higher regulatory costs

New regulation is a near certainty, but it is not likely to be crippling. Already, significant self-regulatory actions taken within the industry (for instance, stricter underwriting standards and bigger down payments) may have the potential to blunt regulatory ardor. The supply of loans to subprime borrowers has already been reduced significantly thanks to the market correction; with capital markets already acting as a self-correcting mechanism, regulators may not wish to appear to be denying lower-income families (who represent most subprime borrowers) a stake in the American dream.

While regulatory changes are likely to lead to higher costs and longer loan-processing times, these changes should be viewed as an incentive to improve operations, step up product innovation, and improve risk-management capabilities. Regulatory and legislative actions aimed at curbing negative-amortization mortgages (which allow borrowers to defer interest and principal payments) and reduced- or no-documentation loans may also contribute to faster industry consolidation. The reduced availability of capital, higher compliance costs, and lower profit margins

for the smaller lenders, whose economics have relied primarily on these higher-margin products, may prove the ultimate catalyst for change.¹

Moves to capture market leadership

In this rapidly consolidating and vertically integrating world, winners will have to review their channel-management strategies, improve their risk-management and pricing capabilities, widen the focus of their product innovation, and fill technology and process gaps—all areas in which complacency may have crept in during more expansionary times.

Strengthening channel management

By 2006 more than 56 percent of all subprime loans originated with a mortgage broker, as opposed to retail or correspondent channels—up from 39 percent in 1998. The subprime industry is therefore significantly more dependent on brokers than the overall residential-mortgage market, where these intermediaries account for only 30 percent of originations. The implication for lenders is clear: managing brokers effectively is a critical capability.

That said, a sustainable broker-centric distribution platform requires state-of-the-art risk-management and fraud-detection capabilities, as well as investments in relationship-building tools such as improved rewards for brokers, marketing support, and customized product offerings (such as refinancing products for ARM customers). Moreover, the national brokers that account for most of the volume tend to be less specialized than they were in the past. Managing hybrid brokers (those that originate both

¹Piotr Kaminski and Anthony M. Santomero, “Viewpoint: Now’s the time to fix your loan practices,” *American Banker*, April 5, 2007.

prime and subprime mortgages) poses unique challenges to most lenders, which still maintain separate sales forces (and fulfillment capabilities) for the two product segments. Lenders will also have to find ways to attract and retain top account executives, who have seen their volumes decline dramatically over the past six to nine months. Weeding out poor performers, adjusting incentives based on peer performance, and consolidating prime and subprime sales forces will help lenders attract the best salespeople. These efforts, our experience suggests, must begin with the greater segmentation of volume-driven brokers. Leading lenders are already starting to use a segmentation approach based on profitability, risk, and growth potential; in this way they can both drive pricing and provide differentiated service levels to their most valuable brokers.

More established lenders, as well as broker-dealers that have recently entered the fray, will need to rethink their optimal channel mix. With fewer independent lenders left in the marketplace, the conduit channel is likely to come under pressure. Driving more production through brokers may therefore require loosening the credit criteria beyond what investors are willing to accept. Some lenders are already starting to look at the direct-to-consumer channel as a cost-effective alternative, especially for the more transaction-oriented refinance borrower. The recent refinancing wave has produced a large number of experienced borrowers who do not need the hand-holding often valued by first-time buyers, and these consumers are proving more open to remote fulfillment. The subprime

market, where most recent production has taken the form of a 2/28 structure (a fixed “teaser” rate switching to a floating rate after two years), is a natural target for this approach. Direct-channel strategies are proving particularly successful when accompanied by a comprehensive refinancing-management program—based on the borrower’s expected performance after the reset—that combines risk mitigation and retention.

[Review risk and pricing models](#)

Advanced risk analytics and pricing will distinguish market leaders in a new, more concentrated subprime-mortgage market. An evolution similar to that experienced by credit card lenders and the subprime auto loan market should be expected in subprime mortgages. Just as Capital One’s use of credit scoring and risk-based pricing revolutionized credit card lending, so improved risk modeling will help mortgage lenders identify the most attractive subprime customers. It will be imperative to move beyond the traditional pricing grids—which are largely based on combined loan-to-value ratios, documentation levels, and FICO credit scores² and mortgage performance—and to take a comprehensive view of the collateral, credit, prepayment, and channel-related fraud risks. Some lenders are starting to use capital-based measures of profitability and explicit portfolio performance targets to supplement or even replace investor specifications.

Despite recent claims to the contrary, automated underwriting is still a major opportunity for many lenders. While a completely automated underwriting model is probably unrealistic, several lenders expect a meaningful portion of

²FICO scores are the most widely available measure of consumer credit risk in the United States.

What's next for collateralized debt obligation and other credit-intensive businesses?

The collateralized-debt-obligation (CDO) market has been a driver of liquidity in the mortgage business, especially in the subprime area. However, the relationship between the two has become codependent: last year, fueled by high margins and profits, more than half of the collateral going to the estimated \$150 billion CDO market came from first- or second-lien subprime mortgages (exhibit). Recent events in the subprime area have significantly narrowed the CDO funding gap; however, the focus at this time has returned to due diligence, risk management, and pricing—especially for subordinate tranches. The result: significantly fewer subprime-backed CDO deals will be done in the near future, and those that are will be less profitable. Given tight spreads elsewhere (for instance, high-yield loans), CDO managers will have to boost volumes (which will be difficult) or innovate.

One thing is clear: as investors avoid high-risk structures, new deals will require more attractive collateral. The CDO investor who acts as an indiscriminate buyer of high-yield products may have disappeared, at least for the foreseeable future. As long as demand for risky assets continues, CDO managers will respond to issues with their preferred “raw material.” Increased subordination levels and lower subprime-mortgage concentrations seem inevitable, but CDO managers and structurers will have to step up their efforts to obtain access to high-quality subprime assets. (Ellington Management’s proposed acquisition of Fremont General’s portfolio appears to be a step in this direction.) That should ensure greater performance transparency and help to identify new arbitrage opportunities through structural innovations, the creative use of nontraditional asset classes, or both.

Undoubtedly, the troubles of the subprime-mortgage market will trigger questions concerning investor demand for other credit assets and the risks involved in credit-intensive fixed-income businesses. Broker-dealers with a significant mix of mortgage revenues should take a portfolio view of their credit businesses in order to assess risks and should then make informed decisions to invest in businesses with more attractive expected returns. Systemic risk remains central to this analysis.

The ballyhooed contagion could spread in three ways: a collapse of common fundamentals, a broad economic decline, or a credit-driven liquidity crunch. None of these scenarios can be ruled out, but they are not equally likely. While the riskier types of Alt-A mortgages¹ are subject to the same housing-market fundamentals as subprime mortgages, other high-yielding credit assets, such as leveraged lending, are not. The course of the US economy could swiftly affect the health of the corporate sector, but at least for the time being, many of the fundamentals remain strong. Past experience (for instance, the liquidity crunch of 1998) suggests that risk premiums can adjust very quickly. With much of the subprime risk off balance sheet and many players enjoying a meaningful surplus of economic capital, however, US banks are unlikely to restrict lending. There is thus some protection against a credit-driven liquidity crunch.

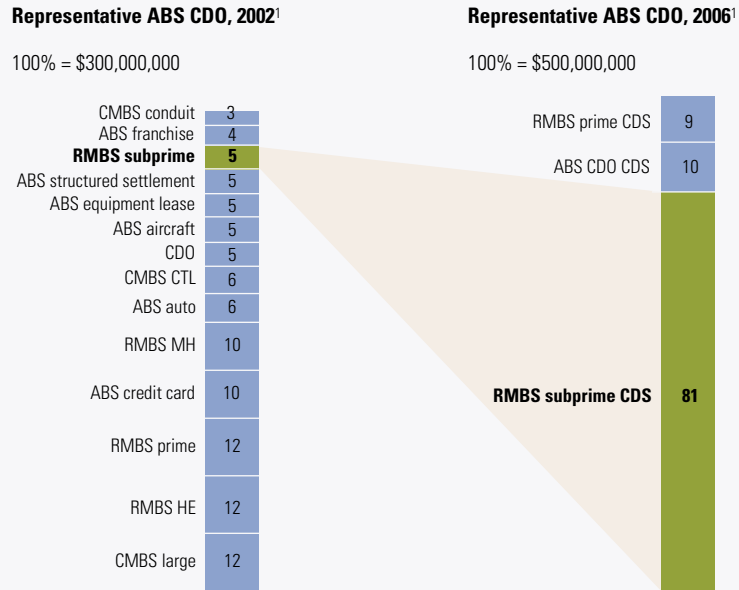
Even without an imminent perfect storm, anyone in the fixed-income business should think through possible scenarios and their impact on the profitability of credit businesses, both within the subprime-mortgage market and beyond.

¹Alt-A mortgage products fall between the prime and subprime segments.

Exhibit
High concentration

Asset-backed security CDOs (collateralized debt obligations) are increasingly focused on residential subprime collateral.

Share of loan origination by type of asset-backed security



Glossary

ABS	Asset-backed securities	CTL	Credit tenant lease
CDO	Collateralized debt obligation	HE	Home equity
CDS	Credit default swap	MH	Manufactured housing
CMBS	Commercial mortgage-backed securities	RMBS	Residential mortgage-backed securities

¹Representative ABS CDOs = 2002 closed CDO issue by SFE CABS III CDO and 2006 closed CDO issue by GSC ABS CDO 2005-1 (part 1 of a series); both SFE CABS III and GSC ABS CDO are limited-liability corporations registered in Cayman Islands.

Source: *Presale Report on Structured Finance CDOs*, April 2002 and Dec 2005, Fitch Ratings

their loans to be approved without a credit officer’s intervention.

Most organizations will need to invest significantly in new personnel in order to close the current gap in risk-analytics capabilities between subprime mortgages and other subprime-asset classes. Given the complexity of modeling subprime-mortgage risks, investments in this area will likely be a source of long-term competitive advantage.

Risk-based pricing is a natural next step for subprime lenders, though that won’t be an easy transition for most, given the broker channel’s tendency to rely on easy-to-use pricing sheets. Some forms of innovation, such as regional pricing, may be easier to accomplish in the near term. Customized pricing, however, will put more pressure on broker point-of-sale systems, as well as fulfillment. In subprime credit cards and automobile FICO arbitrage lending, pricing based on

proprietary risk models (which explore differences between market and internal measures of risk) has become a source of competitive advantage. Subprime-mortgage lenders should benefit from adopting a similar approach and from developing the ability to price loans at a microsegment level.

To benefit fully from vertical integration, banks must also decide where to locate pricing authority and how to coordinate underwriting and risk with the secondary-market pricing of securities and whole loans. Two models are feasible: the production-led option, with origination having ultimate pricing authority (albeit guided by capital markets), and the margin-driven alternative, in which the capital markets division creates daily rate sheets that drive broker and correspondent price points. Universal banks with significant retail distribution and the potential to cross-sell are likely to find the first model superior, while broker-dealers and hedge funds will probably prefer to keep pricing control in the hands of their capital markets desks. In either scenario, lenders need to improve the exchange of information (on issues such as pricing and competitive insights) between origination and their capital markets desks, to install economic-value-based systems for all sell-hold decisions, to determine which risk metrics are most appropriate (for instance, economic value or risk-adjusted returns on economic capital), and to decide which group will manage and hedge risk while products are in the pipeline.

Widen the scope of product innovation

Many lenders have focused on innovating in either origination or structuring; few have concentrated on both areas. The

new wave of consolidation offers lenders an opportunity to innovate in both and to become truly distinctive in the minds of borrowers and investors alike. Subprime-mortgage lenders can learn from consumer goods companies, which use qualitative and quantitative research techniques to identify attractive customer segments and to understand their needs and decision-making behavior. With this information, subprime lenders can develop their next generation of mortgage products and processes and fill gaps in their current product ranges, notably in high-growth segments such as Alt-A and jumbo loans.³

In the near term, the most successful subprime lenders are expected to devote much of their product innovation efforts to the resetting of both subprime and prime adjustable-rate mortgages. The upcoming resets offer an opportunity to retain the most attractive subprime borrowers while mitigating the risk in cases where a significantly higher rate would trigger financial distress for the consumer. The opportunity applies as much to overextended prime and Alt-A borrowers, who can be thought of as “crossover” credit—prime borrowers on the verge of becoming nonprime—as it does to those in existing subprime portfolios. Developing innovative solutions need not involve an even more complex product offer. Instead, the most advanced lenders are focusing on improved service delivery—for example, making it easy for existing customers to refinance—or better pricing.

As for the long term, we expect more attention to be paid to rewarding good credit performance and helping borrowers manage and improve their overall

³Alt-A constitutes the mortgage product segment that falls between prime and subprime; for example, it includes loans made to borrowers who have good credit, on the one hand, but unverified income, on the other. Jumbo mortgages are mortgages with a loan amount above the conventional industry-conforming loan limits, which define the loan size up to which Fannie Mae and Freddie Mac may purchase mortgages in the secondary market.

credit rating and position. Regulatory changes notwithstanding, we expect subprime borrowers with a positive credit outlook to be offered greater flexibility, perhaps through longer reset periods, more gradual resets, or the use of innovative pricing indexes that realign repayment with the borrower's evolving ability to pay. Ultimately, the greater use of proprietary data should provide better pricing and relationship benefits for those borrowers willing to consolidate their lending services (and deposits) with one financial institution.

Fix the process gaps, and then focus on technology

The current downturn also presents an opportunity to concentrate on operations and technology and to introduce longer-term changes to existing fulfillment models. Our experience shows that the wholesale replacement of operations and technology platforms is both risky and expensive; a better approach would be to look at those areas where change is most needed. Declining volumes favor lenders with flexible origination and servicing platforms that can be scaled in response to a future turn in the mortgage cycle; however, this approach also requires lenders to confront costs. With hefty secondary-market premiums gone for the time being, that represents a formidable challenge. Subprime lenders may be tempted to turn to solutions that are often used in the prime market, such as offshoring and greater automation. While such approaches may not be misplaced in

the longer term, fixing the origination processes might be a better first step.

Unfortunately, the subprime-mortgage market is notoriously complex and riddled with exceptions, making it more difficult to automate. For many lenders, the problem is made worse by the lack of a robust set of rules that can be codified in a work flow algorithm—the workhorse of prime-mortgage origination platforms. Instead, subprime-mortgage lenders should adopt a “lean-cell” approach, which significantly improves productivity, cuts down cycle times (thereby improving pull-through rates), and enhances the service levels experienced by both brokers and customers. Under this approach, a cell is defined as a self-contained origination unit, supported by a robust origination system, that is responsible for the end-to-end execution of all processing activities, including the handling of exceptions. If properly executed, this operating model can also accommodate significant variability in demand across multiple cells.

At this point in the mortgage cycle, lenders face a range of challenging strategic issues. That said, ambitious players will be able to expand their share in one of the largest fixed-income markets. Recent turmoil and volatility provide the incentive to review current performance and redefine long-term strategies. **MoCIB**