

## 6YbUb[ 'Ghc\_Y`i bX'6YbUb[ '?Y`Ua Vi K UggYfZU``ZØ\fyf' '@ca Vc\_

?ca d`YhhYf`K UggYfZU``ZØ\fyf`ni `XYb`K UggYfZÄ``Yb`6YbUb[  
Ghc\_Y`i bX'6YbUb[ '?Y`Ua Vi `ja `NYbhfi a `j cb`@ca Vc\_`K ]Y  
G]Y`i bg`YffY]WYbž`U\_hi Y``Y`þZcfa Uh]cbYb`ni `; YVØ\fyb`i bX  
k Ug`G]Y`Yfk UfhYh`8]Y`K UggYfZÄ``Y`6YbUb[ 'Ghc\_Y`i bX  
6YbUb[ '?Y`Ua Vi `g]bX`nk Y]XYf`VYghYb`K UggYfZÄ``Y`Ui ZXYf  
þgY`@ca Vc\_ž`i bX`XUg`k ]`k Ug`\Y]»Yb`8Ug`; YcDUF\_!  
; YV]Yh`Y[ h`Ui ZXYb`UVZU``YbXYb`<Ø[ Y`b`XYg`A ci bh`F]b`U]b]ž  
k c`GØ»k UggYf`Xi fW`X]W\_Y`J i `UbUXYfb`Z]Y»h`i bX`]b`X]Y  
X]W`hYb`8gW`i b[ Y`k UggYfZÄ``Y`XUfi bhYf`ghf`Oa h`K Ybb`G]Y  
bUW`k Y]hYfYb`5VYbhYi Yfb`cXYf`F Y]gY]bgd]fUh]cbYb`ZØf  
@ca Vc\_`gi WYbž`j YfdUggYb`G]Y`b]W`h`a`Y]bYb`A Y[ U!; i ]XY  
ni `XYb`VYghYb`5\_h]j ]h`hYb`Ui Z`@ca Vc\_``Gc`\_ca a Yb`G]Y`ni a  
6YbUb[ 'Ghc\_Y`i bX`ni a `6YbUb[ / Ua d^Y``d/

?ca d`YhhYf`K UggYfZU``ZØ\fyf`ni `XYb`K UggYfZÄ``Yb`6YbUb[ 'Ghc\_Y`  
i bX'6YbUb[ '?Y`Ua Vi `ja `NYbhfi a `j cb`@ca Vc\_`K ]Y`G]Y`i bg  
YffY]WYbž`U\_hi Y``Y`þZcfa Uh]cbYb`ni `; YVØ\fyb`i bX`k Ug`G]Y  
Yfk UfhYh`

8]Y`K UggYfZÄ``Y`6YbUb[ 'Ghc\_Y`i bX'6YbUb[ '?Y`Ua Vi `g]bX`nk Y]  
XYf`VYghYb`K UggYfZÄ``Y`Ui ZXYf`þgY`@ca Vc\_ž`i bX`XUg`k ]`k Ug  
\Y]»Yb`8Ug`; YcDUF\_!; YV]Yh`Y[ h`Ui ZXYb`UVZU``YbXYb`<Ø[ Y`b  
XYg`A ci bh`F]b`U]b]ž`k c`GØ»k UggYf`Xi fW`X]W\_Y`J i `UbUXYfb`Z]Y»h  
i bX`]b`X]Y`X]W`hYb`8gW`i b[ Y`k UggYfZÄ``Y`XUfi bhYf`ghf`Oa h`

K Ybb`G]Y`bUW`k Y]hYfYb`5VYbhYi Yfb`cXYf`F Y]gY]bgd]fUh]cbYb`ZØf  
@ca Vc\_`gi WYbž`j YfdUggYb`G]Y`b]W`h`a`Y]bYb`A Y[ U!; i ]XY`ni `XYb  
VYghYb`5\_h]j ]h`hYb`Ui Z`@ca Vc\_`

Gc`\_ca a Yb`G]Y`ni a `6YbUb[ 'Ghc\_Y`i bX

ni a '6YbUb[ '?Y`Ua Vi 'K UggYfZU`

8]YgY`K UggYfZ`Y`VYZ]bXYb'g]W`ja `7YbhfU`@ca Vc\_`FY[ YbWmž  
Yhk U`%ž) `Ghi bXYb`j cb`GYb[ [ ]`cXYf`() `A ]bi hYb`j cb`HYhYVUhi  
YbhZYfbh`8Ug`8cfZ]gh`U`g`HYfUhu`\_J]`U[ Y`ja `Bcfh`6Uhi `\_]Ub[  
8]ghf]Wh`VY`\_Ubbh`G]Y`VYZ]bXYb'g]W`U`Y`ja `gY`VYb`; YcdUf`!  
; YV]Yh`i bX`g]bX`ØVYf`Y]bY`\_i fnY`K UbXYfi b[ `j cbY]bUbXYf`  
YffY]W`VUf"

⇒W` \UVY`i bhYb`X]Y`Dcg]h]cb`XYf`K UggYfZ`Y`6YbUb[ `Ghc`\_Y`i bX  
6YbUb[ '?Y`Ua Vi `Ub[ Y\YZhYhž`i a `⇒bYb`VY]`XYf`Gi W`Y`bUW`XYf`  
Dcg]h]cb`ni `Y`ZYb"

J C @@GHÿ B 8 ÷ 9 @-GH9. `8 ⇒`69GH9B `K 5GG9F: ÿ @@9`-B`@CA 6C?`  
-B8CB9G⇒B

6YbUb[ `Ghc`\_Y`i bX`6YbUb[ '?Y`Ua Vi `K UggYfZU`  
9]bhf]hhg[ YVØ\ f`&\$%-

GcVU`X`G]Y`XUg`9]b[ Ub[ ghcf`ni a `; YcdUf`\_6YbUb[ `Ghc`\_Y`i bX  
6YbUb[ '?Y`Ua Vi `K UhYfZU`YffY]W`h`UVYbž`k YfXYb`G]Y`ni `Y]bYa  
; YVÄi XY`Ui Z`XYf`fYW`hYb`GY]hY`[ Y`Y]hYh`G]Y`\_ØbbYb`⇒f`A chcffUX  
X]fY`\_h`XUbYVYb`\_cghYb`cg`dUf`\_Yb"

8f]bbYb`a ØggYb`G]Y`XYb`9]bhf]hh`VYnU\`Yb" `5i g`]f[ YbXY]bYa  
; fi bX`\UVYb`g]Y`\_Øfn`]W`X]Y`; YVØ\ fYb`ZØf`j YfgW`]YXYbY  
DU`\_YhY `Ui Z[ YhY]`h" ⇒W`XYb`\_Yž`X]Yg]gh`Y]b`J Yfgi W`ž`a Y\ f`@Yi hY  
XUni `ni `Vf]b[ Ybž`Y]bYb`c`\_U`Yb`; Ø\ fYf`ni `Yb[ U[ ]YfYb" ⇒W`V]b  
XUZØfž`XYb`c`\_U`Yb`Hci f]ga`i`g`i bX`X]Y`FY]gYZØ\ fYf`ni  
i bhYfghØhnYb" `8]YgY`ž`b[ `g`k UfYb`YXcW`YI hfYa`Ui ZXf]b[ `]W`i bX  
j Yfgi W`hYb`ni `VY\Ui dhYbž`XUgg`Y]b`; Ø\ fYf`cV`][ Uhc]gW`gY]ž`k Ug  
XYZ]b]h]j `b]W`h`XYf`; U`gh"

B UW`Y]b`k Yb][ `J Yf\UbX`i b[ `\_cbbhYb`k ]f`g]Y`XUj cb`ØVYfnYi [ Ybž  
i bg`ZØf`Yk Y]g" ) "\$\$\$`-8F`c\`bY`Y]bYb`c`\_U`Yb`; i ]XY`Y]bhfYhYb`ni  
`UggYb" `5a `9bXY`XYg`HU[ Yg]gh`X]Yg]ja`a Yf`bcW`X]Y`\ØW`ghY  
9]bhf]hhg[ YVØ\ f`ZØf`Y]bYb`]bXcbYg]gW`Yb`K UggYfZU`ž`X]Y`]W`Y  
VYnU\`h`\UVY" `K Ä\ fYbX`X]Y`DfY]gYž`HUZY`b`i bX`E`i ]hni b[ Yb`Y[ ]h]a

i bX'cZZ]n]Y''Ui ggY\Ybž`UggYb'G]Y'g]W\`b]W\h'XUni`j Yf`Y]hYbž`Y]bYb  
i bZU]fYb`K UggYfZU`!9]bhf]hgdFY]g'ni`nU\`Yb"

6YUi ZhfU[ i b[ `Y]bYg'@cWU``; i ]XYg

K Ybb'G]Y`Y]VYf`Y]bYb`c\_U`Yb': Ø\fyf`Yb[ U[ ]YfYb'a ØW\hYbž`]gh  
X]Yg`Y]bY`[ fc» Ufh][ Y`A Ø[ `]W\`\_Y]hž'a Y\`f`≠Zcfa Uh]cbYb'ØVYf`X]YgY  
K UggYfZÄ`Y`j cb'@ca Vc`\_ni`Yf\U`hYb"9g`k ]fX`≠bYb`Ui W\`Y]W\hYf  
ZU`Ybž`X]Y`VY]XYb`UbXYfYb`j YfghY`W`hYb`K UggYfZÄ`Y`ni`Z]bXYb  
fUi ZX]Y`]W\`gdÅhYf`bcW\`bÅ\Yf`Y]b[ Y\Yb`k YfXYŁ"

8Yf`DfY]g`ZØf`Y]bYb`c\_U`Yb': Ø\fyf`j Uf]]Yfh"9]b`ZU]fYf`DfY]g`k ÅfY  
Yhk U`+) '\$\$\$`≠F"

K UggYfZU``hci`f`

K Ybb'G]Y`\_Y]bYb`Y][ YbYb`GUhn`F`ÅXYf`\UVYb`cXYf`i a`XYb`9]bhf]hh  
b]W\h'ZY]`gW\Yb'a ØW\hYbž`XUbb`]gh`Y]bY`[ UbnhÅ[ ]][ Y`K UggYfZU``hci`f`  
Y]bY`[ fc» Ufh][ Y`A Ø[ `]W\`\_Y]hž`6YbUb[ `Ghc`\_Y`i bX`6YbUb[ `?Y`Ua`Vi  
K UggYfZU``ni`gY\Yb"

8]Y`Hci`fž`X]Y`]W\`i bhYb`j Yf`b`\_h`\UVYž`VY]b\U`hYh`U`Y`?cghYb`i bX  
cf[ Ub]g]Yfh`X]Y`5V\c`i b[ `i bX`F`ØW\_[ UVY`j cb`l bhYf`ØbZhYb`j cb`gc  
n]Ya``]W\`ØVYfU``]b'@ca Vc`\_"

6l 7<9B`G`9`8`9`69GH9`HCI`F`:`\_`F`8`9G9`:`Y`@@9`:`K`5GG9F`:`5`@@  
H5;`9GHC`I`F`

6YbUb[ !Ghc`\_Y`!K UggYfZU``

C`\_Umž`k Ybb`XUg`Ui`g`XYa``K`Y`[ `]ghž`Uggh`i`bg`ni`XYb`Y][ Yb`h`]W\Yb  
@ca Vc`\_!K UggYfZÄ`Yb`[ Y\Yb`\*8Yf`YfghY`Ui`Z`XYf`@]ghY`]gh`XYf  
K UggYfZU``6YbUb[ `Ghc`\_Y`cXYf`5]f`HYf`†`b`6YbUb[ `Ghc`\_Y`ž`k`]Y`Yf  
j`cb`XYb`9]b\Y]a`]gW\Yb`[ YbUbb`h`k`]fX"

8]YgYf`]gh`b]W\h`ni`ØVYfgY\Yb":`c`[ Yb`G]Y`Y]bZUW\`XYa`DZUX`ZØf  
Y]bYb`Y]W\hYb`GdUn]Yf[ Ub[ `j`cb`Yhk`U`%)`A`]bi`hYbž`V]g`G]Y`X]Y  
@]W\hi`b[ `YffY]W\Yb"

6YbUb[ 'Ghc\_Y`\'Uh'XfY]'5i g[ ØggYž'X]Y`Yk Y]'g]b`Y]b`ZUWYg  
6YW\_Yb`Z]Y»Yb"K Ybb`G]Y`X]YgY`K UggYfZÀ`Y`]b`XYf`HfcW\_YbnY]h  
VYgi WYbž`Yfk UfhYb`G]Y`YXcWž`XUgg`bi f`XYf`<Ui dhk UggYfZU``a ]h  
j c`Yf`?fUZh'ni `gY\Yb`]gh"@Y]XYf`\_Ubb`a Ub`VY]`X]YgYb  
K UggYfZÀ`Yb`b]W`h'gW`k ]a`a`Ybž`XU`XYf`Dcc`gY\`f`ZUW`]'gh`G]Y  
\_ÒbbYb`YXcW`]a`a`Yf`bcW`Y]bY`[ i hY`bUhØf`]W`Y  
K UggYfZU``Xi gW`Y`VY`\_ca`a`Yb"

- 'U`h1 69B5B; 'GHC?9@K 5GG9F: 5@@ž'@CA 6C? 2
- 'U`h1 69B5B; 'GHC?9@K 5GG9F: 5@@ž'@CA 6C? 2

'U`h1 69B5B; 'GHC?9@K 5GG9F: 5@@@CA 6C? 2

## 6YbUb[ '?Y`Ua Vi`K UggYfZU``

J cb`6YbUb[ 'Ghc\_Y`'Ui`g`Zc`[ Yb`G]Y`XYb`?UfhYb`i bX`GW`]'XYfb`ni a  
K UggYfZU``6YbUb[ '?Y`Ua Vi`"8Yf`GdUn]Yf[ Ub[ `XUi`Yfh`bi`f`%)  
A ]bi hYbž`ZØ\fh`X]Y`8gW`i b[ Y`ghfU»Yb`\]bUi`Ž`j`cfVY]`Ub  
6UbUbYbd`UbhU[ Yb`i bX`YbXYh`a ]h`Y]bYa`ghY]Yb`5Vgh]Y[ `ni a  
`YhnhYb`K UggYfZU``"

5]f`HYf`† b`6YbUb[ '?Y`Ua Vi`]'ghY]bYf`a`Y]bYf`@YV`]b[ gk UggYfZÀ`Y  
]b`@ca`Vc`ž`U`Y]b`gW`cb`k`Y]'Yf`gc`Y]bn][ Ufh][ `]gh`'?Y`Ua Vi  
VYXYi hYh`Ui`Z`bXcbYg]gW` B`Yhn`ž`i bX`Yg`]gh`Y]W`h`ni`j`YfghY\Ybž  
k`Ufi`a`"8Ug`K UggYf`Z]Y»h`gUbZi`Y]bY`Ødd][ `fØbY`K`UbX`\]bi`bhYfž  
X]Y`ZUgh`k`]Y`Y]b`DcfhU`ni`Y]bYf`UbXYfYb`K`Y`h`Ui`gg]Y`\h"

8]Y`K`UbX`]'gh`VfY]hž`a`]h`a`Y\`fYfYb`VYfi`\][ YbXYb`?Ug`\_UXYbž`X]Y  
gUbZi]b`Y]b`\_Øbgh]W`Yg`6Yhc`bgW`k`]a`a`VYW\_Yb`Z]Y»Yb"  
U`h1 69B5B; '?9@5A 6I`K 5GG9F: 5@@ž'@CA 6C?ž`B8CB9G`9B`2  
H`ÐD.`G]Y`\_ÒbbhYb`j`Yfgi`W`h`gY]bž`X]fY`\_h`ni`a`<Ui`dhk`UggYfZU``i`bX  
ni`a`Gk`]a`a`]b[`dcc`ni`"Ui`Z`b";`Y]W`"b`\_g`\]bhYf`XYb`Ghi`Z`b`i`bX  
\]bhYf`Y]bYa`J`cf\Ub[ `Ui`g`f`YVYb`i`bX`6Ai`a`Yb`VYZ]bXYh`g]W  
YXcW`Y]b`k`Y]hYfYf`\_Y]bYf`K`UggYfZU``"J`cb`\]Yf`Ui`g`\_ÒbbYb`G]Y  
gc[`Uf`b`UW`f`Y`W`hg[`Y\Ybž`i`a`Y]bY`Yd]gW`Y`8`i`gW`Y`]a`6YbUb[  
?Y`Ua Vi`K UggYfZU``ni`VY`\_ca`a`Yb"

- 'U`h1 69B5B; '?9@5A 6I`K 5GG9F: 5@@ž'@CA 6C?ž

Б8СВ9G→B 2

- 'U`h1 69B5B; `?9@5A 6I `K 5GG9F: 5@ž`@CA 6C?ž  
Б8СВ9G→B 2

' `k Y]hYfY`j YfghYW\_hY`K UggYfZÀ``Y`

K Ug`j ]Y`Y`@i hY`ØVYf`X]Y`K UggYfZÀ``Y`6YbUb[ `Ghc\_Y``i bX`6YbUb[  
 ?Y`Ua Vi `b]W`h`k ]ggYbž`]ghž`XUgg`Yg`\\Yf`hUhg`W`\\W` `` `k Y]hYfY  
 K UggYfZÀ``Y` [ ]Vh`K Ybb`G]Y`Y]bYb`c\_U`Yb`: Ø\fyf`Yb[ U[ ]Yfybž  
 k ]fX`Yf`ΔbYb`k U\fgW`Y]b`]W`nY][ Ybž`k c`g]Y`g]bXž`k Ybb`G]Y  
 XUbuW`ZfU[ Yb"

K Ybb`b]W`hž`XUbb`\_ØbbYb`G]Y`a Y]bYb`j c`gh`bX][ Yb`6`c[ !6Y]hfU[  
 XUfØVYf`YgYb"

@9G9B`G→`89B`JC @@GHÿB8 ÷ 9B`6@C; !DCGH.`?`]k`i`b`i`bX`GYgYfY  
 K UhYfZU`g.`<]XXYb`: U`g`BYUf`6YbUb[ `Ghc\_Y``K UhYfZU`` `@ca Vc\_

K UggYfZU``!H]d dg

- NU\`Yb`G]Y`b]W`h`a Y\`f`U`g` ) "\$\$\$`=8F`ZØf`Y]bY  
9]bhf]hrg\_UfhY
- 9b[ U[ ]Yfyb`G]Y`Y]bYb`c\_U`Yb`: Ø\fyfž`k Ybb`G]Y`a Y\`f  
ØVYf`X]Y`K UggYfZÀ``Y`YfZU`fYb`a ØW`hYb`i bX`<]ZY`VY]`XYf  
Gi W`Y`bUW`XYb`VY]XYb`j YfghYW\_hYb`K UggYfZÀ``Yb  
VYbØh][ Yb
- G]Y`\_ØbbYb`nk ]gW`Yb`U`Yb`K UggYfZÀ``Yb`ja `; YcdUf\_  
6YbUb[ `Ghc\_Y``i bX`6YbUb[ `?Y`Ua Vi `K UhYfZU``gdUn]Yfyb  
[ Y\`Yb` `G]Y`a ØggYb`\_Y]b`A chc`ffUX`a ]YhYb
- JYfa Y]XYb`G]Y`Y]bYb`6Ygi W`Ua `K cW`YbYbXYž`XU`Yg  
gY\`f`j c``gY]b`k ]fX
- 8]YgY`@ca Vc\_!K UggYfZÀ``Y`Z]Y»Yb`ja a Yf`bcW`]b`XYf  
HfcW`YbnY]hž`g]bX`UVYf`]b`XYf`FY[ YbnY]h`Ua `VYghYb"

'U`h1 69B5B; `GHC?9@K 5GG9F: 5@ž`@CA 6C? 2

U`h1 69B5B; `GHC?9@K 5GG9F: 5@ž`@CA 6C? 2

U`h1 C@@M 5GD5Fž`@CA 6C?!K 5GG9F: Ÿ@@9 2

U`h1 69B5B; `?9@5A 6I `K 5GG9F: 5@ž`@CA 6C?ž`Б8СВ9G→B 2

U`h1 69B5B; `?9@5A 6I `K 5GG9F: 5@@ž`@CA 6C?ž`B8CB9G-9B 2

U`h1 69B5B; `?9@5A 6I `K 5GG9F: 5@@ž`@CA 6C?ž`B8CB9G-9B 2

U`h1 69B5B; `?9@5A 6I `K 5GG9F: 5@@ 2

U`h1 69B5B; `GHC?9@K 5GG9F: 5@@ž`@CA 6C? 2

≠g[ YgUa h`UhhYb`k ]f`Y]bY`Yd]gWXY`NY]h`Ub`X]YgYb`K UggYfZÄ`Yb"

≠W`k ØfXY`g]Y`XcfhcVYb`a ]h`a Y]bYa `: Uj cf]hYb`]b`@ca Vc\_

Y]bcfXbYb""BUW`Y]bYa ``Ub[ Yb`HU[ `XYf`K UggYfZU``U[ X`a UW`hYb

k ]f`i bg`[ YfUXY`fYW`hY]h][ `ni a `GcbbYbi bhYf[ Ub[ `Ui Z`DUbhU]

A U`UgY`a ]h`Y]b][ Yb`c`\_U`Yb`@Y[ YbXYb`Ui Z`X]Y`UbghfYb[ YbXY`: U`fh

ni fØW`\_bUW`GYb[ [ ]]"

K ]Y`k Uf`≠fY`9fZU`fi b[ `a ]h`XYb`K UggYfZÄ`Yb`6YbUb[ `Ghc`\_Y`i bX

6YbUb[ `?Y`Ua Vi 3`≠W`k ØfXY`g]Y`[ YfbY`ØfYb"

`U`h1 69B5B; `GHC?9@I B8`69B5B; `?9@5A 6I `K 5GG9F: 5@@ 2

"

8YhU]`g

6Ygi W`X Yb`G]Y`i bg`Ui Z.`Y]bY!fY]gY"XY